
Attachment 9

Special Notes – NYSDOT Specific Projects

Liquid Bituminous Materials - VPP
(2018 NYSDOT Specific Projects)
(State & Federal Funded)

IFB# 23112

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SECTION 1: CHIP SEAL - SPECIFIC PROJECTS

1.1 Introduction

Chip seal is a pavement preventive maintenance treatment which consists of single-sized stone embedded in a liquid bituminous material. The liquid bituminous material seals cracks in the existing pavement and the stone provides a high-friction wearing surface.

1.2 Pricing Information

1.2.1 General

Price quoted for chip seal shall be net per square yard furnished, hauled, delivered, and applied with contractor's equipment totally by the contractor at the locations indicated herein including the cost of labor, surface preparation, and materials, except liquid bituminous materials and cover sand. Liquid bituminous materials used for chip seal and fog seal, and the cover sand will be paid for under separate items. Price quoted per square yard of chip seal shall also include mobilization to the project site, the provision of Work Zone Traffic Control as indicated elsewhere in this Invitation for Bids, and Maintenance Materials Bond as listed in the *Maintenance Material Bonds* section in this Invitation for Bids. The price quoted per gallon of liquid bituminous materials for chip seal and fog seal shall include heating, hauling, and applying the liquid bituminous materials at the project locations indicated herein. The price quoted per square yard of cover sand shall include hauling and applying the necessary cover sand at the project locations indicated herein.

1.3 Asphalt Price Adjustments

1.3.1 General

- a. Asphalt price adjustments allowed will be based on the October 1, 2017 average of the F.O.B. terminal price per ton of unmodified PG 64S-22 binder without anti-stripping agent (base average F.O.B. terminal price). The new monthly average terminal price will be determined by the New York State Department of Transportation based on prices of preapproved primary sources of performance graded binder in accordance with the New York State Department of Transportation Standard Specifications.

The October 1, 2017 average is \$421.000.

NOTE: The same grade of asphalt cement used in establishing the base average F.O.B. terminal price shall be used in establishing the new average F.O.B. terminal price.

In the event that one or more of the New York State Department of Transportation pre-approved sources discontinue posting a price for asphalt cement, the base average F.O.B. terminal **price shall not be recalculated.**

- b. The new average F.O.B. terminal price will be determined based on the above F.O.B. terminal prices posted on the 20th of each month, hereafter known as the "Adjustment Date", during the contract period. However, asphalt price adjustments, in accordance with the formula below, will be effective for deliveries made on and after the first of the month following the adjustment date.
- c. The unit prices of liquid bituminous materials purchased from any award based on this specification will be subject to adjustment based on the following formula:

$$\begin{array}{|c|} \hline \text{Price} \\ \text{Adjustment} \\ \text{(per gallon)} \\ \hline \end{array} = \begin{array}{|c|} \hline \frac{\text{New Monthly Average} \\ \text{FOB Terminal Price} - \text{Base Average} \\ \text{Terminal Price}}{235} \\ \hline \end{array} \times \begin{array}{|c|} \hline \text{Total} \\ \text{Allowable} \\ \text{Petroleum \%} \\ \hline \end{array}$$

Positive Price Adjustment number shall be added to original per gallon Bid Price.

Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

New Monthly Average F.O.B. Terminal Price

The average F.O.B. terminal price for unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation per New York State Department of Transportation Standard Specification.

Base Average F.O.B. Terminal Price

The average F.O.B. terminal price of unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation as of October 1, 2017.

Total Allowable Petroleum

The percentage of total allowable petroleum for each item is as follows:

Material Designation	Grade	Asphalt %	Petroleum Allowance %	Total Allowable Petroleum %
702-3101P	RS-2	63	2.7	65.7
702-3102P	HFRS-2	63	2.7	65.7
702-3301P	HFMS-2	65	8.2	73.2
702-4101P	CRS-2	65	2.7	67.7
702-XXXXT	Diluted Tack Coat	40	0.2	40.2

Asphalt Price Adjustments will not be allowed for materials which do not have an asphalt cement base.

- d. Work performed after the expiration of the contract, where no extension has been granted, resultant from purchase orders placed prior to expiration of the contract will receive the Asphalt Price Adjustments applicable in effect during the last month of the contract.

Asphalt Price Adjustments for any contracts that are extended will be based on the new average for the month in which the work is done applying the same base established for that contract.

- e. Asphalt price adjustments allowed by this contract shall be calculated and applied to the original prices. There will not be asphalt price adjustments unless the change amounts to more than \$0.100 per ton/\$0.010 per gallon as applicable from the original price. In these instances, prices will revert back to the original prices.
- f. All Asphalt Price Adjustments will be computed to three decimal places.
- g. Should these provisions result in a price structure which becomes unworkable, detrimental or injurious to the State or in prices which are not truly reflective of market conditions or which are deemed by the Commissioner to be unreasonable or excessive, and no adjustment in price is mutually agreeable, the Commissioner reserves the sole right upon ten business days written notice mailed to the Contractor to terminate any contract resulting from this bid opening.
- h. All asphalt price adjustments shall be published by the State and issued to all contract holders whose responsibility will be to attach the appropriate State notification (based on when the work was performed) to the payment invoice submitted to agency

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

1.3.2 Asphalt Price Adjustment: Example

Material Designation 702-3301P, HFMS-2

Base Avg. Price per Ton = \$421.000

New Avg. Price per Ton = \$431.000

Total % Asphalt Plus Petroleum Allowance = 73.2%

$$\begin{array}{|c|} \hline \text{Price} \\ \text{Adjustment} \\ \text{(per gallon)} \\ \hline \end{array} = \frac{(431.000 - 421.000)}{235} \times \begin{array}{|c|} \hline 0.732 \\ \hline \end{array}$$

$$\begin{array}{|c|} \hline \text{Price} \\ \text{Adjustment} \\ \text{(per gallon)} \\ \hline \end{array} = \begin{array}{|c|} \hline +\$0.031 \text{ per gallon} \\ \hline \end{array}$$

Positive Price Adjustment number shall be added to original per gallon Bid Price.

Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

1.4 Payment

Payment for Chip seal shall be made at contract price bid for the actual number of completed square yards of chip seal, actual numbers of gallons of bituminous materials for chip seal, actual numbers of gallons of bituminous materials for fog seal, actual number of square yards of cover sand used in the accepted portions of the work. The determination as to quantities involved in any contract shall be accepted as final and binding upon the contractor.

Payment of work zone traffic control and abrading the existing pavement markings shall be included in the payment for number of square yards of completed chip seal.

A delivery slip stating quantities of liquid bituminous materials (modified or unmodified emulsions) shall accompany each shipment. An invoice listing the quantities of surface treatment shall be sent promptly by the contractor to the resident engineer.

1.5 Pre-Chip Seal Conference

The contractor shall schedule a Pre-Chip Seal Conference with the affected Resident Engineer at least two weeks prior to the start of the work under this contract. Project level supervisors from contractor and from the state shall be present at this conference. At this conference contractor shall present their chip seal schedule, mix design, number and types of equipment, chip seal procedure, and Work Zone Traffic Control Plan to the state for approval. The mix design for the chip seal must show the quantity in gallons per square yard of fog seal, the quantity in pounds per square yard of cover sand, the quantity in gallons and the type of liquid bituminous material per square yard, the quantity in pounds per square yard of aggregate, percent of polymer used to modify the asphalt emulsion, quantity in pounds per square yards of fiber (if applicable), and the design curing time. All the component materials used in the mix design shall be representative of the material proposed by the contractors to be used on the project. Adjustment may be required during the construction based on field conditions and with the approval of the state.

The contractor shall also furnish the state the copies of the calibrations of the liquid bituminous materials distributor and the aggregate spreader at the same time. The contractor shall indicate the aggregate sources at this conference. At least one week prior to the start of work under this contract, the contractor shall coordinate the details of the chip seal with the state's representative.

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

1.6 Bonding Requirements – Chip Seal

A Maintenance Material Bond is required for chip seal projects in this IFB. Please see sample in Attachment 10 – *Detailed Specifications – Liquid Bituminous Materials*.

Maintenance bond is to be provided to the attention of the Regional Director of Operations, or their Regional designee as determined at the Pre-Chip Seal conference, for the corresponding Region. Each bond shall be specific to each Project Number, not contract, so that they may be released upon the completion of the terms in the contract for each corresponding Project/site.

1.7 Supervision

The Department of Transportation shall provide supervision for the chip seal operation, and pavement marking abrading if applicable. The Resident Engineer shall designate a Project Supervisor who shall be in responsible charge of the operation. All orders pertaining to Work Zone Traffic Control plan from the Project Supervisor to the contractor shall be binding on the contractor. The following portions of Section 105 - CONTROL OF WORK of the Standard Specifications shall apply to these projects: 105-01 ENGINEER'S AUTHORITY, 105-05 VENDOR RESPONSIBILITY, 105-06 COOPERATION WITH UTILITIES AND OTHER CONTRACTORS.

1.8 Construction Details

The construction details shall comply with the requirements specified herein, including those appearing in the enclosed Attachment 10 - *Detailed Specifications – Liquid Bituminous Materials*. The project supervisor from the State shall have sole responsibility for determining compliance with the specifications. All orders given to the contractor regarding construction details shall be considered final.

1.9 Work Hours

Work shall not be permitted on Sundays and NYS Holidays. If the contractors desire to work overtime on other days, dispensation from NYS Labor Department must be obtained using Department of Labor Form PW-30 (06/17). Night work is prohibited unless agreed to by the Contractor and NYS Department of Transportation. All Overtime Dispensations requests shall be submitted to the Resident Engineer or his/her designee at the preconstruction meeting.

1.10 Special Note for Chip Seal

The Contractor will not be responsible for the initial conditioning of the existing pavement and shoulder surfaces as described in Section 402-3.05 of the NYSDOT Standard Specifications. Patching, joint repair, crack filling will be done by NYSDOT forces prior to the chip seal project. However, once work on the project begins, the Contractor is responsible for keeping the pavement and shoulders clean until the paving operations are completed, as per Section 633-3.01 of the NYSDOT Standard Specifications.

1.11 Restoration of Disturbed Areas

During the course of the work the vendor shall take reasonable care not to disturb areas outside the existing pavement. Any areas disturbed by the vendor shall be returned to their original condition at no expense to the State. Any and all debris generated as part of the work shall be removed by the Vendor upon completion of the project.

1.12 Damaged or Deficient Areas

Prior to acceptance and payment by the State for work under this contract, any placed pavement that ravels, delaminates, fails to properly cure, or is in any way defective shall be redone to the satisfaction of the State at the contractor's expense.

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

1.13 Work Zone Traffic Control

The contractor shall responsible for Work Zone Traffic Control. Traffic shall be controlled in accordance with Manual of Uniform Traffic Control Devices (MUTCD), Section 619-1 through 619-3 of the Standard Specifications as described herein including modifications to the Standard Specifications. The contractor shall submit a Work Zone Traffic Control Plan for approval to the Resident Engineer at the Pre-Work conference. For two-way roadways, Figures TAST-C1R, TAST-C2R, TAST-C3R, TAST-C4R, TAST-C5R, TAST-C7R, TAST-C1UL, TAST-C2UL, TAST-C3UL, TAST-C4U, TAST-C7UL, TAST-C1UH, TAST-C2UH, TAST-C3UH, and TAST-C7UH included in this document may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way roadways, Figures TAST-C5UL, TAST-C6UL, TAST-C8UL, TAST-C5UH, TAST-C6UH, and TAST-C8UH may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way Freeways or Expressways, Figures TAST-E1, TAST-E2, TAST-E3, TAST-E4, TAST-E5, TAST-E6, and TAST-E7 may be used as a basis for development of a Work Zone Traffic Control Plan.

All necessary flaggers for Work Zone Traffic Control shall be provided by the Contractor. For two-way roadways, a minimum of three flaggers shall be provided while the work operation is underway. One shall be stationed at each end of the applicable operation and one shall be stationed with the operation. For one-way roadways, a minimum of two flaggers shall be provided while work operation is underway. One shall be stationed at the beginning of the applicable operation and one shall be stationed with the operation. The Contractor shall station flaggers such that communication is maintained between the flaggers. Hand signals, radios, pilot vehicles, or some other means of communication may be used subject to the approval of the Resident Engineer.

All costs of Work Zone Traffic Control as prescribed by this specification including flagging, temporary pavement marking and/or delineation, and construction signs, are to be included in the unit price bid. No separate payment shall be made.

1.13.1 Permanent Construction Signs

The Contractor shall provide construction signs as specified in Section 619-1 through 619-3 of the Standard Specifications and in the MUTCD. At minimum the Contractor shall install the following permanent construction signs: **(see next page)**

Major intersecting roads are defined as through State, County, Town, Village, or City roads. The Contractor may provide Portable signs as shown in Figure 6F-2 of the MUTCD and meeting the requirements of Section 619 of the Standard Specifications for lane closures during work hours. Signs left active at night shall be rigid and reflectorized in accordance with the Standard Specifications.

With prior permission of the State's Resident Engineer, the Vendor may provide portable signs as shown in Figure 6F-2 of the MUTCD for the above referenced DO NOT PASS and NO CENTER LINE signs. The Contractor shall be responsible for assuring that these signs will be in their upright, visible positions twenty-four hours a day, seven days a week while 2' X 4" temporary yellow markings are used instead of full barrier pavement markings

1.13.2 Temporary Pavement Markings

The Contractor shall install and maintain temporary pavement markings on any paved surface without permanent pavement markings before opening it to traffic, before nightfall or before the end of the work day, whichever comes soonest except for areas that are open during the work shift with channelizing devices or flaggers. Temporary pavement markings shall meet the requirements of Section 619 of the Standard Specifications except that two-lane, two-way highways may be left without full barrier centerlines in no passing zones for a maximum of 7 calendar days provided that NO CENTER LINE (W8-12, black on orange), NO PASSING ZONE (W14-3, black on orange pennant shaped sign), and DO NOT PASS (R4-1) signs are used consistent with the MUTCD and in conjunction with yellow 2 foot by 4 inch temporary markings consisting of retroreflective removable pavement marking tape, paint or yellow temporary overlay markers installed on a 40 ft. cycle to delineate the centerline location.

The State is responsible for the final pavement markings unless otherwise indicated in the contract. If the vendor chooses to install NO CENTER LINE and DO NOT PASS signs and temporary yellow 2 foot by 4 inch pavement markings in lieu of full barrier centerline markings, the signs shall be left in place until the state has completed installing the final pavement markings. The state will normally complete final pavement markings within 7 days of the project completion. However, if unavoidable situations delay the pavement marking installation the signs shall remain in place for 14 calendar days after the project has been completed or until the state has completed installing the final pavement markings, whichever comes first. If permanent pavement marking cannot be installed within 14 days of the project completion, state must install interim pavement marking including center lines, edge lines, stop bars, and simple crosswalks with no hatching before the end of 14 days after project completion.

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

All costs for Work Zone Traffic Control including flagging, temporary pavement markings, delineation, and construction signs are to be included in the prices bid per ton or square yard as applicable.

SIGN	MINIMUM SIZE	LOCATION
ROAD WORK NEXT _____ MILES	<u>G20-1</u> Conventional 36" x 18" Freeways 48" x 24"	On main line upstream of project in each direction
END ROAD WORK	<u>G20-2</u> Conventional 36" x 18" Freeways 48" x 24"	On main line after end of project in each direction
ROAD WORK AHEAD	<u>W20-1</u> Conventional 36" x 36" Freeways 48" x 48"	On main line in advance of the affected highway segment in each direction and on major intersecting roads 300 -500 feet in advance of main line. Sign should be covered if it conflicts with temporary signing in the vicinity. (Place between the G20-1 and the first warning sign that states condition- i.e. W8-12, W8-9 or W8-15)
DO NOT PASS	<u>R4-1</u> Conventional 24" x 30"	If 2'x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign at or within 100 feet of the beginning of the unmarked area, second within 1,000 feet and subsequent signs, spaced every ½ mile along project in each direction
NO CENTER LINE	<u>W8-12</u> Conventional 36" x 36"	If 2'x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign in advance of the condition and the first "DO NOT PASS" sign: 300' urban is preferred (100' minimum), 500' rural is preferred (200' minimum). Place additional signs spaced every 2 miles on mainline in each direction and after every major intersecting road.
LOW SHOULDER	<u>W8-9</u> Conventional 36" x 36" Freeways 48" x 48"	Place on mainline spaced every 2 miles along project in each direction and after every major intersecting road until shoulder back-up is installed (if conditions warrant use, place between the W8-12 and R4-1, maintaining a minimum of 200' between signs for rural roads and 100' on urban. The W8-12 can be moved upstream to accommodate the required spacing.)
LOOSE GRAVEL	<u>W8-7</u> 36" x 36"	Place on mainline at start of the project and spaced every ½ miles along project in each direction.
30 MPH	<u>W13-1P</u> 18" x 18"	Mounted on W8-7 LOOSE GRAVEL sign

**All signs should maintain an absolute minimum spacing of 200' rural or 100' urban. 500' is preferred on rural and 300' is preferred on urban. Double stacking of any of the above signs, or combination thereof, will NOT be permitted.

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

1.13.3 Abrading Existing Pavement Markings

The Contractor shall remove any epoxy or thermoplastic pavement markings. Other markings shall be removed as ordered by the Resident Engineer. Care shall be taken to avoid damage to passing traffic. All damage to passing traffic caused by the Contractor's operations shall be the Contractor's responsibility. Waste material generated by the abrading operation shall be cleaned up and disposed of by the Vendor.

When the Contractor abrades the existing pavement markings, the Contractor shall place temporary pavement markings as specified elsewhere in this Invitation for Bids under Work Zone Traffic Control, unless the paving material will be placed the same day as pavement markings are abraded. The Contractor shall make every effort to expeditiously place the paving material in areas where pavement markings have been abraded and temporary pavement markings are in place. Under no circumstances will temporary pavement markings be allowed for more than five calendar days in areas where pavement markings have been abraded. In this event, the Contractor shall be required to place full pavement markings at no cost to the state. During the pavement markings abrading operation, traffic will be controlled by the Contractor in accordance with the Work Zone Traffic Control requirements included herein. The Contractor shall submit a proposed Traffic Control Plan to the Resident Engineer for approval. The plan may be based on the Work Zone Traffic Control drawings included in this Invitation for Bids.

Payment for pavement marking abrading shall be included in the price bid per square yard of chip seal. No separate payment shall be made.

1.13.4 Special Note: Work Zone Intrusion Initiative

As part of the Department of Transportation's Work Zone Intrusion Initiative, the following countermeasures shall apply to this Invitation for Bids.

Channelizing Device Spacing Reduction

A maximum channelizing device spacing of 40 ft. shall be provided at work sites where workers are exposed to traffic. This spacing shall be maintained a reasonable distance upstream of workers, and shall be used throughout the work zone.

Where tapers are located less than 500 ft. from the work site, the 40-ft. spacing shall be used in the tapers as well.

Drums or vertical panels are preferred for intermediate to long-term stationary work zones, and at any locations where the risk of intrusion is high. Traffic cones are normally adequate for work zones set up and removed on a daily basis.

In long lane or shoulder closures, at least two channelizing devices shall be placed transversely at maximum 800 ft. intervals to discourage traffic from driving through the closed lane. Transversely placed devices are not required where pilot car are in use.

Frequent checks shall be made to reset channelizing devices dislodged by traffic.

Flagger Station Enhanced Setups

Additional cones and a flag tree meeting Section 6F.62 of the MUTCD shall be used upstream of flagger stations to provide added warning to drivers. These devices shall be used for flagger stations except those that are constantly moving or are in use at one location for no more than a few minutes. If the W20-7a Flagger sign is used, the additional cones and flag tree shall also be used.

For additional details on Flagger Station Enhanced Setups, see Work Zone Traffic Control drawings in this Invitation for Bids.

Temporary Rumble Strips

a. Description

This work shall consist of the installation, maintenance and subsequent removal of temporary rumble strips in paving work zones where indicated in the Invitation for Bids or as directed by the Engineer.

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

b. Materials

Rumble strips shall be either constructed in place from a raised strip of asphalt concrete or constructed in place with removable pavement marking tape. Raised removable tape rumble strips shall be formed by applying four layers of removable black non-reflectorized removable pavement marking tape. The tape shall be applied to a clean, dry pavement surface in accordance with the manufacturer's recommendations. The pavement surface shall be cleaned with compressed air just prior to application of the tape.

Raised asphalt rumble strips shall be formed from hot mix asphalt meeting the requirements of Items 402.058903 or 402.098903. Tack coat meeting the requirements of Materials Designation 702-XXXXT Asphalt Emulsion Diluted Tack Coat shall be used to adhere the rumble strip to the existing pavement. Temporary rumble strips shall be formed using a specially constructed rumble strip paver (drag box) pulled transversely across the pavement, or by hand placement between forms fixed to the pavement. If forms are used, they shall be removed prior to compaction of the asphalt mixture. Compaction shall be accomplished using a plate tamper or a static roller. The roadway surface on which the rumble strips are to be attached shall be dry, free of surface contaminants such as dust or oil, and shall be 45°F or greater unless otherwise authorized by the Engineer. The pavement surface shall be cleaned with compressed air just prior to tack coating and subsequent installation of rumble strips.

Temporary rumble strips shall be placed in a succession of three 6-Strip Patterns according to the attached "Suggested Layout Details - Temporary Rumble Strips". Each strip shall be placed on 10 foot centers and traversing the full width of each travel lane. On curbed roadways, rumble strips shall end a minimum of 3 feet from the curb so as to not interfere with drainage. Rumble strips shall be between 6 inches and 9 inches in width and have a final compacted thickness of 0.4 inches \pm 0.1 inches.

Any raised rumble strips that fail to adhere to the pavement, or become damaged or flattened such that, in the opinion of the Engineer, they are no longer performing their intended function, shall be replaced or repaired by the Contractor to the satisfaction of the Engineer. Any associated damage to the pavement shall also be repaired by the Contractor to the satisfaction of the Engineer. These replacements or repairs shall be made at no additional expense to the Purchasing Agency.

When directed by the Engineer, (e.g., prior to the start of the winter plowing season), or prior to the placement of successive pavement courses, the Contractor shall completely remove the rumble strips from the pavement. Rumble strips shall be removed upon completion of work and concurrently with the removal of other temporary traffic control signs and devices. Any pavement that is damaged in the process of removing the rumble strips shall be repaired by the Contractor to the satisfaction of the Engineer at no additional expense to the Purchasing Agency.

c. Basis of Payment

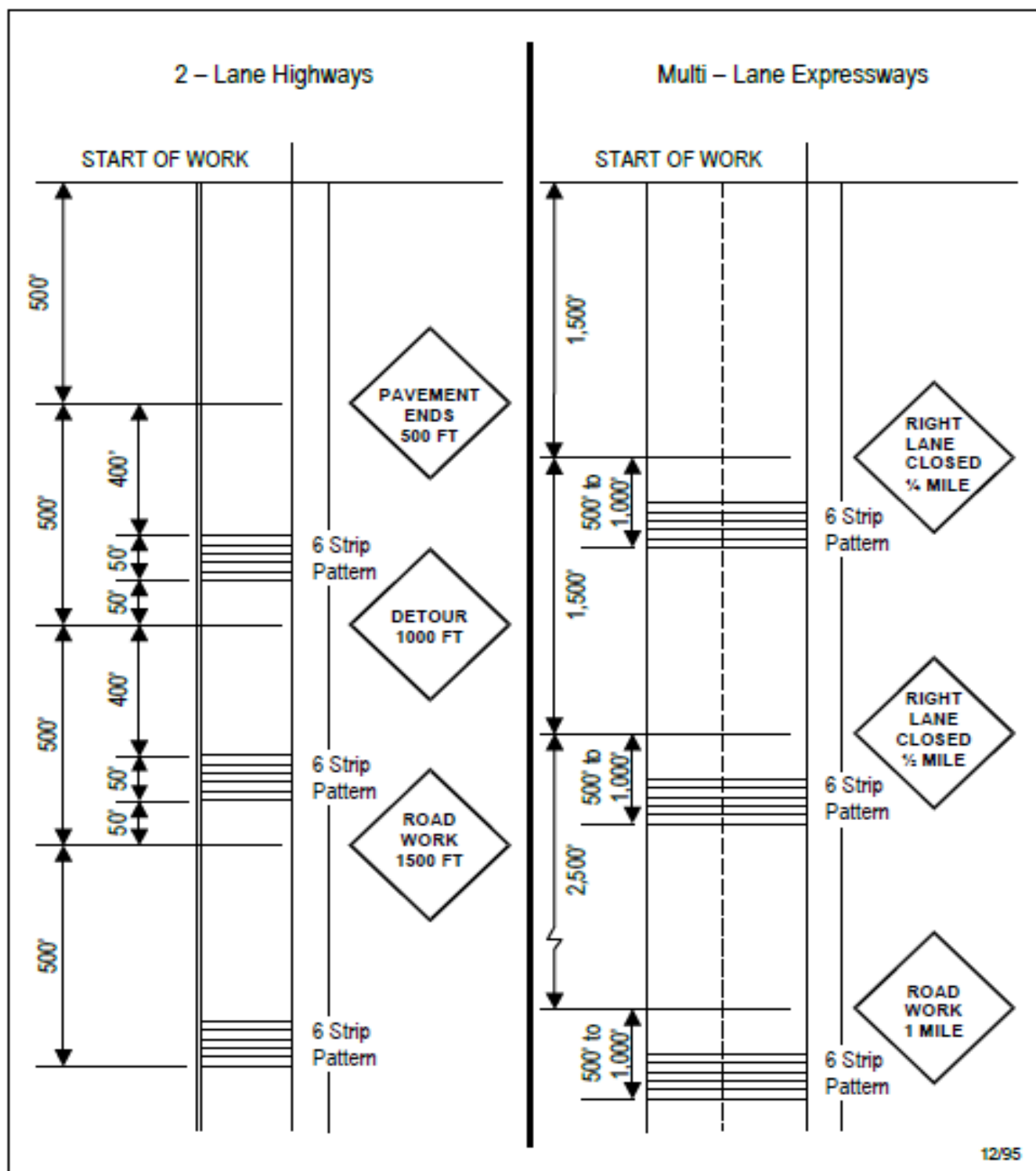
All costs for the installation, maintenance and removal of temporary rumble strips are included in the price per ton or square yard as appropriate. No separate payment shall be made.

d. Suggested Layout Details Drawing-- Temporary Rumble Strips

See the Suggested Layout Details Drawing on the **next page**.

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

Suggested Layout Details – Temporary Rumble Strips



SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

1.14 Special Notes – Chip Seal

1.14.1 Funding Source (Chip Seal)

Project 5V1825, 6V1813, 9V1851, and 9V1852 will be funded by Federal Aid.

Project 9V1823 will be a State funded project.

1.14.2 Special Note - Rail Road Involvement in Federal Funded Projects

Bidders are advised that there may be active at-grade railroad crossings within the limits of projects in this Invitation for Bids. The following at-grade railroad crossings have been identified, but there may be others within the limits of these projects that have not been identified:

Project Number	County	Route	Rail Road Name	Location
5V1825	Cattaraugus	Rte. 62	New York Lake Erie	RM 62 5201 1232

At the identified at-grade crossings, and any other active at grade railroad crossings encountered on the projects in this Invitation for Bids, the contractor shall conduct its work and handle the equipment such that no part of any material or equipment shall foul a track, catenary, electrical facility or signal facility. A track is fouled when any object is brought within 7.62 M (25') of the centerline of the track or the nearest point of a rail road's catenary, electrical facility or signal facility.

1.14.3 NYSDOT REGION 5 Special Notes (Chip Seal)

Pavement Markings

It shall be the contractor's responsibility to inventory and document the existing pavement marking patterns prior to milling and/or resurfacing and submit to the Engineer a copy of the inventory prior to beginning work. The contractor shall be responsible for completing all layout work necessary for the installation of all final pavement markings. If the original markings are obliterated, the contractor shall contact the resident engineer for guidance on their location.

Any existing pavement markings shall be covered with fog seal prior to application of the Chip Seal. Any fresh patches (same season) shall also be covered with fog seal prior to Chip Seal Application.

Time Restrictions

All Region 5 Projects shall follow the time restrictions outlined in the "Work Zone Traffic Control - for Design/Construction on State Highways in Region 5" available on the NYSDOT website or thru the Regional Transportation Systems Operations group excepting those projects listed on the Region 5 project specific special notes.

Project 5V1825

This project was chip sealed last season with (1ST) stone and it is being followed with (1A) stone. Coordination will be necessary with NYSDOT drainage project at this location scheduled to be let 6/18/2018. The drainage should be completed prior to the surface treatment.

1.14.4 NYSDOT Region 6 Special Notes (Chip Seal)

Region 6 Specific Special Notes:

All Region 6 Chip, Fog, and Sand Overlay projects shall be completed no later than August 31, 2018. After award, a schedule reflecting this shall be submitted before start of work to the Region's ARDO, Karen Patterson, for approval.

The Region requests all Preconstruction paperwork be submitted electronically as pdf files to Karen.Patterson@dot.ny.gov prior to the preconstruction meeting, or all documentation be brought to the Preconstruction meeting electronically as .pdf files on a CD or USB "thumb" drive that will not be returned to the contractor.

SECTION 1: CHIP SEAL - SPECIFIC PROJECTS (Cont'd)

1.14.4 NYSDOT Region 6 Special Notes (Chip Seal) (Cont'd)

No work shall be permitted, to minimize travel delays associated with major holidays, during the following periods:

- Friday, May 25, 2018-sunrise, Tuesday, May, 29, 2018.
- Tuesday, July 3, 2018- sunrise, Thursday, July 5, 2018.
- Friday, August 31, 2018- sunrise, Tuesday, September 4, 2018.

In lieu of longitudinal cones full project length between open and closed lanes of traffic, the contractor may elect to substitute, when using pilot vehicles, use of cones placed transversely across the closed lane at intervals per section 619-3.02 J.2 (every 800') and at strategic locations, such as intersections and driveways.

Paint with beads is the only option permitted in Region 6 for temporary and interim pavement markings, unless approved on a case by case basis by the Resident Engineer. Offset the centerline temporary/interim pavement markings so that the permanent markings will cover up the temporary/interim markings, as follows: 8" centerline offset for 2 lane roads, 6" centerline offset for multi-lane roadways.

All stockpile, spoils, and clean-out sites need to be preapproved by the Regional Maintenance Environmental Coordinator, Ruth Hart, prior to use.

1.15 Detailed Specifications – Chip Seal

Please, see Attachment 10 – *Detailed Specifications – Liquid Bituminous Materials*.

1.15.1 Project Dimensions - Chip Seal

Information on pavement widths for projects in this Invitation for Bids is listed for informational purposes only. The dimensions listed are the best information available, but 100% accuracy is not guaranteed. Bidders should visit the project site to confirm the dimensions given and familiarize themselves with the project particulars before submitting a bid. The Department assumes no responsibility for erroneous information listed herein.

The pavement width listed is the total width of all the travel lanes only.

The shoulder width is for one shoulder only.

Project Number	Travel Lanes Width (feet) (total)	Lane Width (feet) (one lane)	Shoulder Width (feet) (one shoulder)	Number of Lanes
5V1825	20-22	10-11	7-8	2
6V1813	24	12	3.5 - 6.25	2
9V1823	22	11	4	2
9V1851	22	11	3	2
9V1852	20	10	3	2

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS

2.1 Introduction

Cold Recycling of bituminous concrete pavements is a corrective maintenance technique. The existing pavement is milled off for a depth of 3 to 4 inches, a liquid bituminous material is added to the millings, and the resulting mixture is placed and compacted on the milled surface. A new bituminous concrete sealing layer is added later. Existing cracks are eliminated and the resulting pavement should last for many years.

2.2 Pricing Information

2.2.1 General

Price quoted for cold recycling shall be net per square yard completed with contractor's equipment totally by the contractor at the locations indicated herein. The price quoted for cold recycling per square yard shall also include mobilization to the project site and the provision of Work Zone Traffic Control as indicated elsewhere in this Invitation for Bids.

Some projects in this Invitation for Bids include an optional bid item to supply the liquid bituminous material necessary for the cold recycling. **Bidders shall either submit a bid for an emulsion or a PG binder per project, but not both.** The price quoted per gallon for either the asphalt emulsion or PG 64S-22 binder (liquid bituminous material) shall include heating, hauling, and applying the liquid bituminous material at the project locations indicated herein. The price quoted per ton for aggregate shall include hauling and applying the necessary aggregate as per the mix design at the project locations indicated herein.

If fog seal is applied, it will be paid under separate item as the total volume of material used for fog seal operations. The price quoted per gallon of fog seal shall include heating, hauling, and applying the liquid bituminous material used for fog sealing operation at the project locations indicated herein.

If Portland cement is used, it will be paid under separate item as the total tons of material used at the location. The price quoted per ton of Portland cement shall include hauling, delivery, and mixing.

2.3 Asphalt Price Adjustments

2.3.1 General

- a. Asphalt price adjustments allowed will be based on the October 1, 2017 average of the F.O.B. terminal price per ton of unmodified PG 64S-22 binder without anti-stripping agent (base average F.O.B. terminal price). The new monthly average terminal price will be determined by the New York State Department of Transportation based on prices of preapproved primary sources of performance graded binder in accordance with the New York State Department of Transportation Standard Specifications.

The October 1, 2017 average is \$421.000.

NOTE: The same grade of asphalt cement used in establishing the base average F.O.B. terminal price shall be used in establishing the new average F.O.B. terminal price.

In the event that one or more of the New York State Department of Transportation pre-approved sources discontinue posting a price for asphalt cement, the base average F.O.B. terminal **price shall not be recalculated.**

- b. The new average F.O.B. terminal price will be determined based on the above F.O.B. terminal prices posted on the 20th of each month, hereafter known as the "Adjustment Date", during the contract period. However, asphalt price adjustments, in accordance with the formula below, will be effective for deliveries made on and after the first of the month following the adjustment date.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

- c. The unit prices of liquid bituminous materials purchased from any award based on this specification will be subject to adjustment based on the following formula:

$$\begin{array}{|c|} \hline \text{Price} \\ \text{Adjustment} \\ \text{(per gallon)} \\ \hline \end{array} = \frac{\begin{array}{|c|} \hline \text{New Monthly Average} \\ \text{FOB Terminal Price} \\ \hline \end{array} - \begin{array}{|c|} \hline \text{Base Average} \\ \text{Terminal Price} \\ \hline \end{array}}{235} \times \begin{array}{|c|} \hline \text{Total} \\ \text{Allowable} \\ \text{Petroleum \%} \\ \hline \end{array}$$

Positive Price Adjustment number shall be added to original per gallon Bid Price.

Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

New Monthly Average F.O.B. Terminal Price

The average F.O.B. terminal price for unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation per New York State Department of Transportation Standard Specification.

Base Average F.O.B. Terminal Price

The average F.O.B. terminal price of unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation as of October 1, 2017.

Total Allowable Petroleum

The percentage of total allowable petroleum for each item is as follows:

Material Designation	Grade	Asphalt %	Petroleum Allowance %	Total Allowable Petroleum %
702-3201	MS-2	65	8.2	73.2
702-3301	HFMS-2	65	8.2	73.2
702-3401	HFMS-2h	65	2.7	67.7
702-3402	HFMS-2s	65	8.2	73.2
702-3501	SS-1	65	0.2	65.2
702-3601	SS-1h	65	0.2	65.2
702-4201	CMS-2	65	10.2	75.2
702-4301	CMS-2h	65	10.2	75.2
702-4401	CSS-1	65	0.2	65.2
702-4501	CSS-1h	65	0.2	65.2
	PG 64S-22	100	0.2	100.2

Asphalt Price Adjustments will not be allowed for materials which do not have an asphalt cement base.

- d. Work performed after the expiration of the contract, where no extension has been granted, resultant from purchase orders placed prior to expiration of the contract will receive the Asphalt Price Adjustments applicable in effect during the last month of the contract.

Asphalt Price Adjustments for any contracts that are extended will be based on the new average for the month in which the work is done applying the same base established for that contract.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

- e. Asphalt price adjustments allowed by this contract shall be calculated and applied to the original prices. There will not be asphalt price adjustments unless the change amounts to more than \$0.100 per ton/\$0.010 per gallon as applicable from the original price. In these instances, prices will revert back to the original prices.
- f. All Asphalt Price Adjustments will be computed to three decimal places.
- g. Should these provisions result in a price structure which becomes unworkable, detrimental or injurious to the State or in prices which are not truly reflective of market conditions or which are deemed by the Commissioner to be unreasonable or excessive, and no adjustment in price is mutually agreeable, the Commissioner reserves the sole right upon ten business days written notice mailed to the Contractor to terminate any contract resulting from this bid opening.
- h. All asphalt price adjustments shall be published by the State and issued to all contract holders whose responsibility will be to attach the appropriate State notification (based on when the work was performed) to the payment invoice submitted to agency

2.3.2 Asphalt Price Adjustment: Example

This example is for illustration purposes only. Actual Base Average Price, etc., may vary:

Material Designation 702-3301, HFMS-2

Base Avg. Price per Ton = \$421.000

New Avg. Price per Ton = \$431.000

Total % Asphalt Plus Petroleum Allowance = 73.2%

$$\begin{array}{c} \text{Price} \\ \text{Adjustment} \\ \text{(per gallon)} \end{array} = \frac{(431.000 - 421.000)}{235} \times 0.732$$

$$\begin{array}{c} \text{Price} \\ \text{Adjustment} \\ \text{(per gallon)} \end{array} = +\$0.031 \text{ per gallon}$$

Positive Price Adjustment number shall be added to original per gallon Bid Price.

Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

2.4 Payment

Payment for cold recycling shall be made at the contract price bid for the actual number of completed square yards of cold recycling; the actual number of tons of aggregate; the actual number of gallons of either asphalt emulsion (unmodified or modified) or PG 64S-22 binder at 60 degrees F verified by the receiving agency used in the accepted portions of the work; if used, the actual number of gallons of asphalt emulsion used for fog sealing at 60 degrees F verified by the receiving agency used in the accepted portions of the work; and if used, actual number of tons of Portland cement. The determination as to quantities involved in any contract shall be accepted as final and binding upon the contractor.

A delivery slip stating quantities of liquid bituminous material (unmodified or modified emulsion or PG 64S-22 binder) shall accompany each shipment. An invoice listing the quantities of cold recycling shall be sent promptly by the contractor to the engineer.

No separate payment will be made for the use of water in the mixing process. Any work required for the maintenance and repair of the cold recycling including sweeping by the contractor during the ten-day curing period and for an additional twenty days thereafter shall be done at the contractor's expense.

Payment for work zone traffic control shall be included in the payment for the number of square yards of completed recycling.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.5 Pre-Recycling Conference

The contractor shall schedule a Pre-Recycling Conference with the affected resident engineer after the acceptance of the mix design by the State and at least one week prior to the start of the recycling. Project-level supervisors for both the owner agency and the contractor shall be present at this conference. At this conference the contractor shall present Certificates of Insurance evidencing compliance with the additional insurance requirements set forth in the INSURANCE clause, their proposed recycling schedule, procedure, equipment, mix design, calibration and Work Zone Traffic Control Plan to the State for approval. Prior to the start of recycling, the contractor shall coordinate the details of the recycling with the resident engineer.

2.6 Supervision

The Department of Transportation shall provide supervision for the recycling operation, and pavement marking abrading if applicable. The Resident Engineer shall designate a Project Supervisor who shall be in responsible charge of the operation. All orders pertaining to Work Zone Traffic Control plan from the Project Supervisor to the contractor shall be binding on the contractor. The following portions of Section 105 - CONTROL OF WORK of the Standard Specifications shall apply to these projects: 105-01 ENGINEER'S AUTHORITY, 105-05 VENDOR RESPONSIBILITY, 105-06 COOPERATION WITH UTILITIES AND OTHER CONTRACTORS.

2.7 Work Hours

Work shall not be permitted on Sundays and NYS Holidays. If the contractors desire to work overtime on other days, dispensation from NYS Labor Department must be obtained using Department of Labor Form PW-30 (06/17). Night work is prohibited unless agreed to by the Contractor and NYS Department of Transportation. All Overtime Dispensations requests shall be submitted to the Resident Engineer or his/her designee at the preconstruction meeting.

2.8 Construction Details

The construction details shall comply with the requirements specified herein, including those appearing in the enclosed Attachment 10 - *Detailed Specifications – Liquid Bituminous Materials*. The project supervisor from the State shall have sole responsibility for determining compliance with the specifications. All orders given to the contractor regarding construction details shall be considered final.

2.9 Restoration of Disturbed Areas

During the course of the work the vendor shall take reasonable care not to disturb areas outside the existing pavement. Any areas disturbed by the vendor shall be returned to their original condition at no expense to the State. Any and all debris generated as part of the work shall be removed by the Vendor upon completion of the project.

2.10 Damaged or Deficient Areas

Prior to acceptance and payment by the State for work under this contract, any placed pavement that ravels, delaminates, fails to properly cure, or is in any way defective shall be redone to the satisfaction of the State at the contractor's expense.

2.11 Possible Mix Design – Cold Recycling

All NYSDOT Regions except Regions 3 and 6

The Department may core the pavement and supply those cores to the contractor. The quantities shown on price pages are estimated and indicate the amount and type of added aggregate and the type and amount of asphalt emulsion and the amount of PG 64S-22 binder (if the option is provided) to properly recycle the pavement. The contractor shall develop their bids for square yards of cold recycling, aggregate and **either emulsion (unmodified or modified) or PG binder (if the option is provided) for each project** using the estimated quantities. After award, the contractor shall develop their own mix design as per the detailed specifications and submit it to the agency's representative for approval. The bidder shall submit a bid for cold recycling, aggregate, and either asphalt emulsion or PG 64S-22 binder (if the option is provided). **If the bidder's bid does not conform to these requirements, their bid offer will be rejected.** Core results may be obtained from respective Resident Engineer or Regional Materials Engineer.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.11 Possible Mix Design – Cold Recycling (Cont'd)

Regions 3 and 6

The possible mix design is shown on bid pages and indicates the amount and type of added aggregate and the type and amount of asphalt emulsion, and the amount of PG 64S-22 binder (if the option is provided) to properly recycle the pavement. The contractor shall develop their bids for square yards of cold recycling, aggregate and **either emulsion (unmodified or modified) or PG binder (if the option is provided) for each project** using the indicated possible mix design.

After award, the contractor shall take pavement cores and develop their own mix design and submit it to the agency's representative for approval. This mix design must be submitted a minimum of ten working days prior to the start of work. The bidder shall submit a bid for cold recycling, aggregate, and either asphalt emulsion or PG 64S-22 binder (if the option is provided). **If the bidder's bid does not conform to these requirements, their bid offer will be rejected.**

2.12 Work Zone Traffic Control

The contractor shall be responsible for Work Zone Traffic Control. Traffic shall be controlled in accordance with Manual of Uniform Traffic Control Devices (MUTCD), Section 619-1 through 619-3 of the Standard Specifications as described herein including modifications to the Standard Specifications. The contractor shall submit a Work Zone Traffic Control Plan for approval to the Resident Engineer at the Pre-Work conference. For two-way roadways, Figures TAST-C1R, TAST-C2R, TAST-C3R, TAST-C4R, TAST-C5R, TAST-C7R, TAST-C1UL, TAST-C2UL, TAST-C3UL, TAST-C4U, TAST-C7UL, TAST-C1UH, TAST-C2UH, TAST-C3UH, and TAST-C7UH included in this document may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way roadways, Figures TAST-C5UL, TAST-C6UL, TAST-C8UL, TAST-C5UH, TAST-C6UH, and TAST-C8UH may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way Freeways or Expressways, Figures TAST-E1, TAST-E2, TAST-E3, TAST-E4, TAST-E5, TAST-E6, and TAST-E7 may be used as a basis for development of a Work Zone Traffic Control Plan.

All necessary flaggers for Work Zone Traffic Control shall be provided by the Contractor. For two-way roadways, a minimum of three flaggers shall be provided while the work operation is underway. One shall be stationed at each end of the applicable operation and one shall be stationed with the operation. For one-way roadways, a minimum of two flaggers shall be provided while work operation is underway. One shall be stationed at the beginning of the applicable operation and one shall be stationed with the operation. The Contractor shall station flaggers such that communication is maintained between the flaggers. Hand signals, radios, pilot vehicles, or some other means of communication may be used subject to the approval of the Resident Engineer.

All costs of Work Zone Traffic Control as prescribed by this specification including flagging, temporary pavement marking and/or delineation, and construction signs, are to be included in the unit price bid. No separate payment shall be made.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.12.1 Permanent Construction Signs

The Contractor shall provide construction signs as specified in Section 619-1 through 619-3 of the Standard Specifications and in the MUTCD. At minimum the Contractor shall install the following permanent construction signs:

SIGN	MINIMUM SIZE	LOCATION
ROAD WORK NEXT _____ MILES	<u>G20-1</u> Conventional 36" x 18" Freeways 48" x 24"	On main line upstream of project in each direction
END ROAD WORK	<u>G20-2</u> Conventional 36" x 18" Freeways 48" x 24"	On main line after end of project in each direction
ROAD WORK AHEAD	<u>W20-1</u> Conventional 36" x 36" Freeways 48" x 48"	On main line in advance of the affected highway segment in each direction and on major intersecting roads 300 -500 feet in advance of main line. Sign should be covered if it conflicts with temporary signing in the vicinity. (Place between the G20-1 and the first warning sign that states condition- i.e. W8-12, W8-9 or W8-15)
DO NOT PASS	<u>R4-1</u> Conventional 24" x 30"	If 2'x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign at or within 100 feet of the beginning of the unmarked area, second within 1,000 feet and subsequent signs, spaced every ½ mile along project in each direction
NO CENTER LINE	<u>W8-12</u> Conventional 36" x 36"	If 2'x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign in advance of the condition and the first "DO NOT PASS" sign: 300' urban is preferred (100' minimum), 500' rural is preferred (200' minimum). Place additional signs spaced every 2 miles on mainline in each direction and after every major intersecting road.
LOW SHOULDER	<u>W8-9</u> Conventional 36" x 36" Freeways 48" x 48"	Place on mainline spaced every 2 miles along project in each direction and after every major intersecting road until shoulder back-up is installed (if conditions warrant use, place between the W8-12 and R4-1, maintaining a minimum of 200' between signs for rural roads and 100' on urban. The W8-12 can be moved upstream to accommodate the required spacing.)
GROOVED PAVEMENT	<u>W8-15</u> Conventional 36" x 36" Freeways 48" x 48"	On any roadway 500 feet in advance of rebates milled under this contract, but not paved. Remove or cover after paving rebate.

**All signs should maintain an absolute minimum spacing of 200' rural or 100' urban. 500' is preferred on rural and 300' is preferred on urban. Double stacking of any of the above signs, or combination thereof, will NOT be

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

permitted.

Major intersecting roads are defined as through State, County, Town, Village, or City roads. The Contractor may provide Portable signs as shown in Figure 6F-2 of the MUTCD and meeting the requirements of Section 619 of the Standard Specifications for lane closures during work hours. Signs left active at night shall be rigid and reflectorized in accordance with the Standard Specifications.

With prior permission of the State's Resident Engineer, the Vendor may provide portable signs as shown in Figure 6F-2 of the MUTCD for the above referenced DO NOT PASS and NO CENTER LINE signs. The Contractor shall be responsible for assuring that these signs will be in their upright, visible positions twenty-four hours a day, seven days a week while 2' X 4" temporary yellow markings are used instead of full barrier pavement markings

2.12.2 Temporary Pavement Markings

The Contractor shall install and maintain temporary pavement markings on any paved surface without permanent pavement markings before opening it to traffic, before nightfall or before the end of the work day, whichever comes soonest except for areas that are open during the work shift with channelizing devices or flaggers. Temporary pavement markings shall meet the requirements of Section 619 of the Standard Specifications except that two-lane, two-way highways may be left without full barrier centerlines in no passing zones for a maximum of 7 calendar days provided that NO CENTER LINE (W8-12, black on orange), NO PASSING ZONE (W14-3, black on orange pennant shaped sign), and DO NOT PASS (R4-1) signs are used consistent with the MUTCD and in conjunction with yellow 2 foot by 4 inch temporary markings consisting of retroreflective removable pavement marking tape, paint or yellow temporary overlay markers installed on a 40 ft. cycle to delineate the centerline location.

The State is responsible for the final pavement markings unless otherwise indicated in the contract. If the vendor chooses to install NO CENTER LINE and DO NOT PASS signs and temporary yellow 2 foot by 4 inch pavement markings in lieu of full barrier centerline markings, the signs shall be left in place until the state has completed installing the final pavement markings. The state will normally complete final pavement markings within 7 days of the project completion. However, if unavoidable situations delay the pavement marking installation the signs shall remain in place for 14 calendar days after the project has been completed or until the state has completed installing the final pavement markings, whichever comes first. If permanent pavement marking cannot be installed within 14 days of the project completion, state must install interim pavement marking including center lines, edge lines, stop bars, and simple crosswalks with no hatching before the end of 14 days after project completion.

All costs for Work Zone Traffic Control including flagging, temporary pavement markings, delineation, and construction signs are to be included in the prices bid per ton or square yard as applicable.

2.12.3 Special Note: Work Zone Intrusion Initiative

As part of the Department of Transportation's Work Zone Intrusion Initiative, the following countermeasures shall apply to this Invitation for Bids.

Channelizing Device Spacing Reduction

A maximum channelizing device spacing of 40 ft. shall be provided at work sites where workers are exposed to traffic. This spacing shall be maintained a reasonable distance upstream of workers, and shall be used throughout the work zone.

Where tapers are located less than 500 ft. from the work site, the 40-ft. spacing shall be used in the tapers as well.

Drums or vertical panels are preferred for intermediate to long-term stationary work zones, and at any locations where the risk of intrusion is high. Traffic cones are normally adequate for work zones set up and removed on a daily basis.

In long lane or shoulder closures, at least two channelizing devices shall be placed transversely at maximum 800 ft. intervals to discourage traffic from driving through the closed lane. Transversely placed devices are not required where pilot car are in use.

Frequent checks shall be made to reset channelizing devices dislodged by traffic.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

Flagger Station Enhanced Setups

Additional cones and a flag tree meeting Section 6F.62 of the MUTCD shall be used upstream of flagger stations to provide added warning to drivers. These devices shall be used for flagger stations except those that are constantly moving or are in use at one location for no more than a few minutes. If the W20-7a Flagger sign is used, the additional cones and flag tree shall also be used.

For additional details on Flagger Station Enhanced Setups, see Work Zone Traffic Control drawings in this Invitation for Bids.

Temporary Rumble Strips

a. Description

This work shall consist of the installation, maintenance and subsequent removal of temporary rumble strips in paving work zones where indicated in the Invitation for Bids or as directed by the Engineer.

b. Materials

Rumble strips shall be either constructed in place from a raised strip of asphalt concrete or constructed in place with removable pavement marking tape. Raised removable tape rumble strips shall be formed by applying four layers of removable black non-reflectorized removable pavement marking tape. The tape shall be applied to a clean, dry pavement surface in accordance with the manufacturer's recommendations. The pavement surface shall be cleaned with compressed air just prior to application of the tape. Raised asphalt rumble strips shall be formed from hot mix asphalt meeting the requirements of Items 402.058903 or 402.098903. Tack coat meeting the requirements of Materials Designation 702-XXXXT Asphalt Emulsion Diluted Tack Coat shall be used to adhere the rumble strip to the existing pavement. Temporary rumble strips shall be formed using a specially constructed rumble strip paver (drag box) pulled transversely across the pavement, or by hand placement between forms fixed to the pavement. If forms are used, they shall be removed prior to compaction of the asphalt mixture. Compaction shall be accomplished using a plate tamper or a static roller. The roadway surface on which the rumble strips are to be attached shall be dry, free of surface contaminants such as dust or oil, and shall be 45°F or greater unless otherwise authorized by the Engineer. The pavement surface shall be cleaned with compressed air just prior to tack coating and subsequent installation of rumble strips.

Temporary rumble strips shall be placed in a succession of three 6-Strip Patterns according to the attached "Suggested Layout Details - Temporary Rumble Strips". Each strip shall be placed on 10 foot centers and traversing the full width of each travel lane. On curbed roadways, rumble strips shall end a minimum of 3 feet from the curb so as to not interfere with drainage. Rumble strips shall be between 6 inches and 9 inches in width and have a final compacted thickness of 0.4 inches \pm 0.1 inches.

Any raised rumble strips that fail to adhere to the pavement, or become damaged or flattened such that, in the opinion of the Engineer, they are no longer performing their intended function, shall be replaced or repaired by the Contractor to the satisfaction of the Engineer. Any associated damage to the pavement shall also be repaired by the Contractor to the satisfaction of the Engineer. These replacements or repairs shall be made at no additional expense to the Purchasing Agency.

When directed by the Engineer, (e.g., prior to the start of the winter plowing season), or prior to the placement of successive pavement courses, the Contractor shall completely remove the rumble strips from the pavement. Rumble strips shall be removed upon completion of work and concurrently with the removal of other temporary traffic control signs and devices. Any pavement that is damaged in the process of removing the rumble strips shall be repaired by the Contractor to the satisfaction of the Engineer at no additional expense to the Purchasing Agency.

c. Basis of Payment

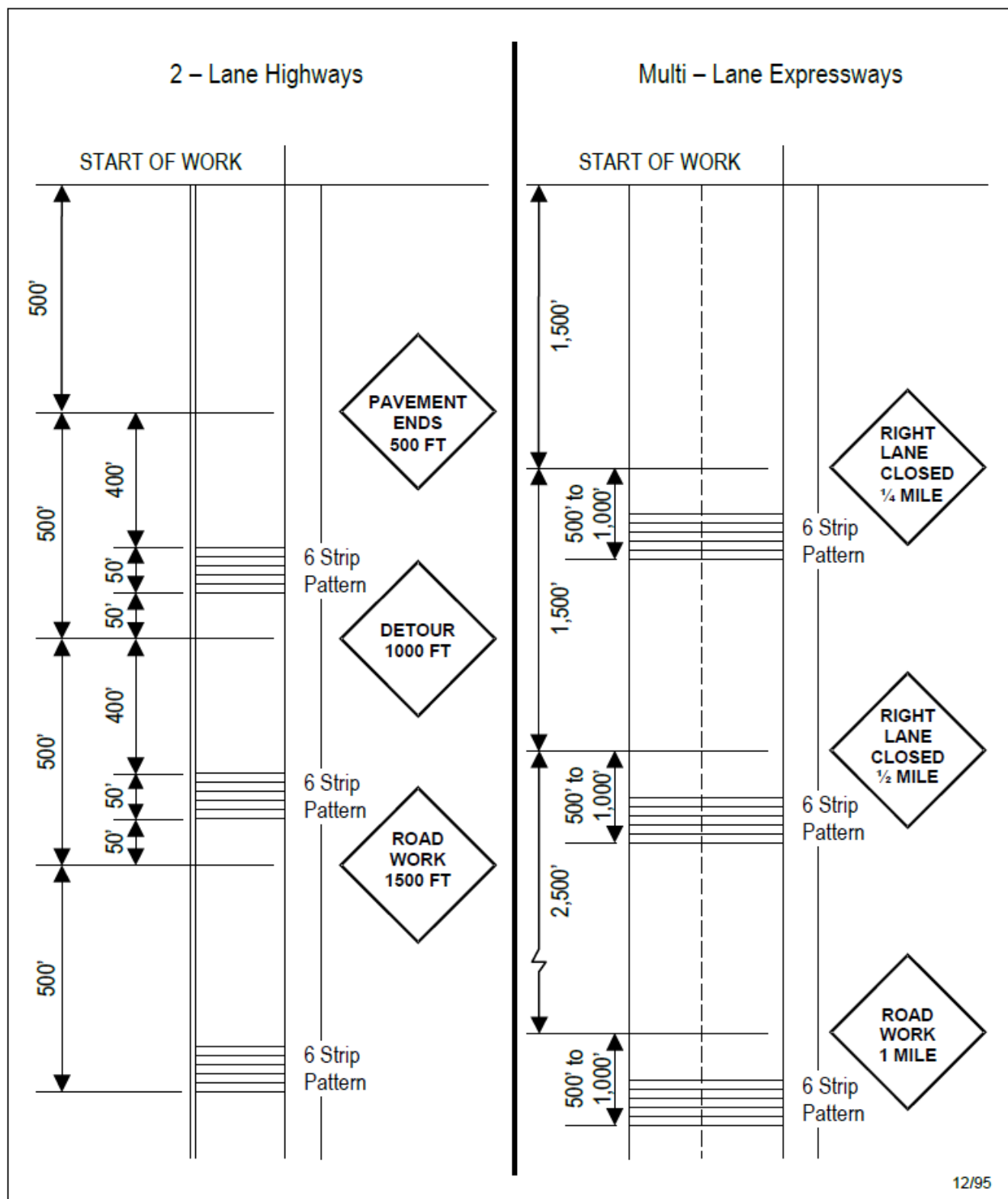
All costs for the installation, maintenance and removal of temporary rumble strips are included in the price per ton or square yard as appropriate. No separate payment shall be made.

d. Suggested Layout Details Drawing-- Temporary Rumble Strips

See the Suggested Layout Details Drawing on the **next page**.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

Suggested Layout Details -- Temporary Rumble Strips



12/95

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.13 Special Notes – Cold Recycling

2.13.1 Funding Source (Cold Recycling)

Projects 1V1821, 1V1822, 1V1851, 1V1871, 1V1881, 360342, 360362, 6V1741, 6V1842, 6V1931, 6V2031, and 9V1865 will be funded by Federal Aid.

Project 360348, 360364, 360367, 360384, and 360386 are 100% State funded.

2.13.2 Special Note for Coordination with Other Projects (Cold Recycling)

All the projects in this Contract Award Notification involve HMA overlay to the cold recycling through separate contract(s). All projects shall require that the cold recycling contractor coordinates their work with the top course contractor(s) to provide required curing period before placing the next course as well as to minimize disruption to the traveling public and the time traffic is running over a recycled surface.

2.13.3 Special Note for Pilot Vehicle (Cold Recycling)

Unless otherwise specified, the highway shall be kept open to traffic at all times. Traffic shall be discontinued on the lanes where work is being performed on these projects; and as soon as recycling is done and rolled, controlled traffic may be permitted thereon. The Contractors shall provide sufficient two-way radio equipped pilot vehicles to guide traffic around recycling work at a speed not to exceed 15 mph. The pilot vehicles shall be equipped with construction signs meeting the requirements of Section 6F.58 of the Manual of Uniform Traffic Control Devices and a rotating amber beacon.

SIGN	MINIMUM SIZE	LOCATION
PILOT VEHICLE FOLLOW ME	G20-4 CONVENTIONAL 36"x18"	ON BACK OF PILOT VEHICLES

The pilot vehicle shall have the name of the Contractor prominently displayed.

All cost for Work Zone Traffic Control including flagging, temporary pavement markings, channelizing devices, construction signs, and pilot vehicles shall be included in the prices per square yard for cold recycling. No separate payment shall be made. **The use of the pilot shall be as ordered by the Resident Engineer.**

2.13.4 NYSDOT REGION 1 Special Notes (Cold Recycling)

All Region 1 Projects shall follow the following holiday restrictions:

There shall be no temporary lane closures permitted on the following dates:

6:00 AM May 24 to 6:00 AM May 30
6:00 AM June 29 to 6:00 AM July 5
6:00 AM Aug 31 to 6:00 AM Sept 4
6:00 AM Oct 5 to 6:00 AM Oct 9
6:00 AM Nov 21 to 6:00 AM Nov 26
6:00 AM Dec 21 to 6:00 AM Jan 2 (2019)

Region 1 Projects – Pavement Markings:

It shall be the contractor's responsibility to inventory and document the existing pavement marking patterns prior to milling and/or resurfacing and submit to the Engineer a copy of the inventory prior to beginning work. The contractor shall be responsible for completing all layout work necessary for the installation of all final pavement markings. If the original markings are obliterated, the contractor shall contact the resident engineer for guidance on their location.

Region 1 Projects – Non-Vibratory Rolling:

Contractor shall use non-vibratory rolling over any bridge structure, large culvert or known utility within the project limits or as ordered by the engineer in charge.

Region 1 Recycling Operations

Recycling operations shall progress in the opposite direction of traffic. This provision may only be waived by the Region 1 Materials Engineer.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.13.4 NYSDOT REGION 1 Special Notes (Cold Recycling) (Cont'd)

Project 1V1821 – Rt. 73 Essex County RM 1502 to 1522

Lane Closure Restrictions Site Specific:

- There shall be no temporary lane closures permitted between Monday, June 4 and Sunday, June 10, 2018 (Americade)
- There shall be no temporary lane closures permitted between Thursday July 19 and Monday, July 23, 2018 (Ironman)
- There shall be no temporary lane closures permitted between Thursday September 6 and Monday, September 10, 2018 (Ironman)

The recycling operations for this project shall be complete by **August 25, 2018**. The Contractor shall submit a schedule to the Engineer, to this effect, prior to beginning operations.

Project 1V1822 – Rt. 74 Essex County RM 1031 to 1080

Lane Closure Restrictions Site Specific:

- There shall be no temporary lane closures permitted between Monday, June 4 and Sunday, June 10, 2018 (Americade)

The recycling operations for this project shall be complete by **August 25, 2018**. The Contractor shall submit a schedule to the Engineer, to this effect, prior to beginning operations.

Project 1V1851 – Rt. 2 Rensselaer County RM 2130 to 2191

Lane Closure Restrictions Site Specific:

- None for Route 2

The recycling operations for this project shall be complete by **August 25, 2018**. The Contractor shall submit a schedule to the Engineer, to this effect, prior to beginning operations.

Project 1V1871 – Rt. 8 Warren County RM 1088 to 1175

Lane Closure Restrictions Site Specific:

- There shall be no temporary lane closures permitted between Monday, June 4 and Sunday, June 10, 2018 (Americade)

The recycling operations for this project shall be complete by **August 25, 2018**. The Contractor shall submit a schedule to the Engineer, to this effect, prior to beginning operations.

Special Note on “Reduced Add-Stone” Trials

Item 416.10 will require “Reduced Add-Stone” trials at no additional cost above the bid price, and in accordance with the following:

- The contractor will be required to formulate and submit three (3) mix designs in accordance with Materials Procedure (MP) 416 and the following:
 - Mix design #1 will in accordance with the requirements of MP 416.
 - Mix design #2 will be formulated with half of the Add Stone used in Mix #1. For example, if Mix design #1 requires 18% Add Stone, then Mix Design will require 9% Add stone.
 - Mix Design #3 will be formulated with no (0%) Add Stone.
- A one-day trial of CIPR production will be performed using Mix Design #2.
- A one-day trial of CIPR production will be performed using Mix Design #3.
- Scheduling of the trial days must be in concurrence with the Engineer in charge.
- All other requirements of the specification apply.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.13.4 NYSDOT REGION 1 Special Notes (Cold Recycling) (Cont'd)

Project 1V1881- Rt. 22 Washington County RM 1243 to 1329

Lane Closure Restrictions Site Specific:

- None for Route 22

Special Note on “Reduced Add-Stone” Trials

Item 416.10 will require “Reduced Add-Stone” trials at no additional cost above the bid price, and in accordance with the following:

- The contractor will be required to formulate and submit three (3) mix designs in accordance with Materials Method (MM) 416 and the following:
 - Mix design #1 will in accordance with the requirements of MM 416.
 - Mix design #2 will be formulated with half of the Add Stone used in Mix #1. For example, if Mix design #1 requires 18% Add Stone, then Mix Design will require 9% Add stone.
 - Mix Design #3 will be formulated with no (0%) Add Stone.
- A one-day trial of CIPR production will be performed using Mix Design #2.
- A one-day trial of CIPR production will be performed using Mix Design #3.
- Scheduling of the trial days must be in concurrence with the Engineer in charge.
- All other requirements of the specification apply.

2.13.5 NYSDOT REGION 3 Special Notes (Cold Recycling)

All Region 3 Projects shall follow the following holiday restrictions:

There shall be no temporary lane closures permitted on the following dates:

May 26 – May 29

June 30– July 4

All Cold in place recycling projects must be completed no later than August 31st, 2018. Contractor shall determine whether it is necessary to add or remove material such that the pavement profile is not changed after recycling. In lieu of longitudinal cones full project length between open and closed lanes of traffic, the contractor may elect to substitute, when using pilot vehicles, use of cones placed transversely across the closed lane at intervals per section 619-3.02 J.2 (every 800') and at strategic locations, such as intersections and driveways. Recycling operations shall progress in the opposite direction of traffic. This provision may only be waived by the Region 3 Materials Engineer.

Project 360342 – Rte. 91; Onondaga County

Re-compaction of the Recycled Mixture

Item 416.10 will require re-compaction of the recycled mixture at no additional cost above the bid price, and in accordance with the following:

- The re-compaction must be performed a minimum of three (3) days after the recycling process but prior to the construction of the overlay. The scheduling of the re-compaction must be after a minimum of two (2) dry and sunny days and be in concurrence with the Engineer-in-charge.
- Re-compact the recycled mixture in accordance with the requirements of 416-3.08, Compaction, including:
 - the number/type of rollers
 - the minimum number of roller passes
 - and the use of a density gauge/operator.

If during the re-compaction, either of the following conditions are observed, the Engineer-in-charge may change the minimum number of passes, change the vibratory effort, or stop the re-compaction process altogether:

- There is no improvement in the density after the minimum number of passes has been achieved.
- Damage (checking, cracking, etc.) to the recycled mixture is occurring.
- M&PT will be required as detailed in the contract documents.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.13.5 NYSDOT REGION 3 Special Notes (Cold Recycling) (Cont'd)

Project 360386 – Rte. 392; Tompkins County

Re-compaction of the Recycled Mixture

Item 416.10 will require re-compaction of the recycled mixture at no additional cost above the bid price, and in accordance with the following:

- The re-compaction must be performed a minimum of three (3) days after the recycling process but prior to the construction of the overlay. The scheduling of the re-compaction must be after a minimum of two (2) dry and sunny days and be in concurrence with the Engineer-in-charge.
- Re-compact the recycled mixture in accordance with the requirements of 416-3.08, Compaction, including:
 - the number/type of rollers
 - the minimum number of roller passes
 - and the use of a density gauge/operator.

If during the re-compaction, either of the following conditions are observed, the Engineer-in-charge may change the minimum number of passes, change the vibratory effort, or stop the re-compaction process altogether:

- There is no improvement in the density after the minimum number of passes has been achieved.
- Damage (checking, cracking, etc.) to the recycled mixture is occurring.
- M&PT will be required as detailed in the contract documents.

2.13.6 NYSDOT REGION 6 Special Notes (Cold Recycling)

Region 6 Specific Special Notes:

No work shall be permitted, to minimize travel delays associated with major holidays, during the following periods:

- Friday, May 25, 2018-sunrise, Tuesday, May, 29, 2018.
- Tuesday, July 3, 2018- sunrise, Thursday, July 5, 2018.
- Friday, August 31, 2018- sunrise, Tuesday, September 4, 2018.

The Region requests all Preconstruction paperwork be submitted electronically (after award) as pdf files to Karen.Patterson@dot.ny.gov prior to the preconstruction meeting, or all documentation be brought to the Preconstruction meeting electronically as .pdf files on a CD or USB “thumb” drive that will not be returned to the contractor.

The expectation of Region 6 is that fog seal shall only be used when environmental conditions (pending rain, cooler temperatures, etc.) could result in a negative impact to the mat (raveling, etc.); Contractors should not plan to fog seal a mat at the close of business daily as part of their normal operations. Region 6 does not anticipate paying for fog seal, so Contractors should plan accordingly.

In lieu of longitudinal cones full project length between open and closed lanes of traffic, the contractor may elect to substitute, when using pilot vehicles, use of cones placed transversely across the closed lane at intervals per section 619-3.02 J.2 (every 800') and at strategic locations, such as intersections and driveways.

All Region 6 Cold Recycling projects shall be completed no later than August 31, 2018. A schedule reflecting this shall be submitted before start of work to the Region's ARDO, Karen Patterson, for approval.

Paint with beads is the only option permitted in Region 6 for temporary and interim pavement markings, unless approved on a case by case basis by the Resident Engineer. Offset the centerline temporary/interim pavement markings so that the permanent markings will cover up the temporary/interim markings, as follows: 8" centerline offset for 2 lane roads, 6" centerline offset for multi-lane roadways.

3 Rollers will be required to be used on all Region 6 cold recycling projects. The same roller cannot be substituted as the “knock-down” and “finish” roller.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.13.6 NYSDOT REGION 6 Special Notes (Cold Recycling) (Cont'd)

All coring shall be coordinated with the Regional Materials Engineer, Dennis Cotton. The mix design submittal for approval shall include all data associated with each core, this shall include but not limited to locations and all laboratory results used to develop the mix design. Additionally, the Regional Materials Engineer may designate companion cores to be taken for QA testing in the regional lab, this shall be done in the presence of the RME or his designee.

Region 6 will waive the requirement to have the nuclear gage inspector on site at the start of the operation for the cold recycling operation. This inspector shall be on site within 4 hours of the start of the operation or as required by the Resident Engineer.

A reminder that per Code Rule 753, a “Dig Safe” ticket shall be submitted for each project notifying of “...the movement or removal...of pavement...”. Some of these utilities may request “no vibratory rolling” for a distance up to 100’ over interstate/intercontinental gas/petroleum transverse crossings. Contractors can visit the following website to view whether there is a likelihood for these utilities in the project limits:

<https://www.npms.phmsa.dot.gov/> and then click the npms public map viewer link and follow the instructions.

All stockpile, spoils, and clean-out sites need to be preapproved by the Regional Maintenance Environmental Coordinator, Ruth Hart, prior to use.

The following bridges are within the project limits and are not to receive the cold recycle treatment:

Project Number	BIN/CIN	Reference Marker
6V1842	1016410	21-6402-3236
	1096350	21-6402-3250

Project 6V1741

There may be a Village of Wayland waterline project progressing within the Village boundaries during the 2018 construction season. The waterline project is adjacent to this project. Work zone coordination with the contractor for the Village of Wayland may be required.

There is an extra-wide (approximately 18’) northbound shoulder from RMM 63-6401-1034 to RMM 63-6401-1036, with adjacent concrete gutter. Residency forces will remove the concrete gutter prior to any CIPR work. The additional width beyond an 8’ shoulder (approximately 10’) shall be milled to dirt, with the millings hauled away by the contractor, as part of this contract. The square yard quantity for this work will be included in Item 416.10.

Project 6V1842

There may be a Village of Wayland waterline project progressing within the Village boundaries during the 2018 construction season. The waterline project is adjacent to this project. Work zone coordination with the contractor for the Village of Wayland may be required.

Special Note on Re-compaction of the Recycled Mixture

Item 416.10 in Project 6V1842 will require re-compaction of the recycled mixture at no additional cost above the bid price, and in accordance with the following:

- The re-compaction must be performed a minimum of three (3) days after the recycling process but prior to the construction of the overlay. The scheduling of the re-compaction must be after a minimum of two (2) dry and sunny days and be in concurrence with the Engineer-in-charge.
- Re-compact the recycled mixture in accordance with the requirements of 416-3.08, Compaction, including:
 - the number/type of rollers
 - the minimum number of roller passes
 - and the use of a density gauge/operator.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.13.6 NYSDOT REGION 6 Special Notes (Cold Recycling) (Cont'd)

Project 6V1842 (Cont'd)

If during the re-compaction, either of the following conditions are observed, the Engineer-in-charge may change the minimum number of passes, change the vibratory effort, or stop the re-compaction process altogether:

- There is no improvement in the density after the minimum number of passes has been achieved.
- Damage (checking, cracking, etc.) to the recycled mixture is occurring.
- M&PT will be required as detailed in the contract documents.

Project 6V2031

No CIPR work can begin until after July 1, 2018, to allow for replacement of a culvert within the project area.

2.13.7 NYSDOT REGION 9 Special Notes (Cold Recycling)

Region 9 Recycling Operations

All recycling operations for Region 9 shall be complete by August 31, 2018. The Contractor shall submit a schedule to the Engineer, to this effect, prior to beginning operations.

Recycling operations shall progress in the opposite direction of traffic. This provision may only be waived by the Region 9 Materials Engineer.

All recycled surfaces shall be fog sealed and temporary striping installed before opening to traffic.

Project 9V1865 – Rt. 10 Schoharie County RM 1063 to 1117

The contractor shall mill the shoulders 4 feet wide and 4" deep and remove this material to stockpile immediately ahead of the recycling operation. This material can be hauled by the contractor to 2 sites along Rt. 10: Pull off at Merchant Road and Rt. 10 near RM 1075 and a pull off at Rt. 10 near Haven Lane RM 1149. It is intended to include a shoulder break for the 3' wide shoulder. The contractor shall include the method to be used for this in their MMP. Payment for the shoulder milling/removal will be made under item 416.10. All material removed from this operation will become the property of NYSDOT. The Contractor will supply all equipment necessary to manage the stockpile.

Use of Portland Cement

Item 416.10 in Project 9V1865 will require Portland Cement be used for 2 production days at no additional cost above the bid price, and in accordance with the following:

- Use material meeting the requirements of Section 701-01 of the Standard Specifications, Type I/II Cement. Other cements may be used with the approval of the Director of the Materials Bureau.
- Portland cement will be added at a rate of 1% by weight of material to be recycled.
- Apply the cement using a method approved by the Engineer-in-charge (EIC)
- Scheduling of this work must be in concurrence with the EIC.

SECTION 2: COLD RECYCLING - SPECIFIC PROJECTS (Cont'd)

2.14 Detailed Specifications – Cold Recycling

Please see Attachment 10 – *Detailed Specifications – Liquid Bituminous Materials*.

2.14.1 Project Dimensions - Cold Recycling

Information on pavement widths for projects in this Invitation for Bids is listed for informational purposes only.

The dimensions listed are the best information available, but 100% accuracy is not guaranteed. Bidders should visit the project site to confirm the dimensions given and familiarize themselves with the project particulars before submitting a bid. The Department assumes no responsibility for erroneous information listed herein.

The pavement width listed is the total width of all the travel lanes only.

The shoulder width is for one shoulder only.

Project Number	Recycling Depth (inch)	Travel Lanes Width (feet) (total)	Lane Width (feet) (one lane)	Shoulder Width (feet) (one shoulder)	Number of Lanes
1V1821	4	22	11	3	2
1V1822	4	24 - 48	12	4	2-4
1V1851	4	20	10	4	2
1V1871	4	22	11	4	2
1V1881	4	22	11	3	2
360342	4	20	10	6	2
360348	4	20	10	4	2
360362	4	22	11	7 - 8	2
360364	4	20	10	4	2
360367	4	20	10	4	2
360384	4	20 - 22	10 - 11	3 - 4	2
360386	4	22	11	4	2
6V1741	4	24	12	3.5 - 8	2
6V1842	4	23	12	3.5 - 5	2
6V1931	3	22	11	4 - 6	2
6V2031	3	22	11	6 - 7	2
9V1865	4	22	11	3	2

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS

3.1 Introduction

Crack sealers are hot poured liquid bituminous materials (rubberized asphalt) used to seal cracks in the surface of highway pavements.

3.2 Pricing Information

3.2.1 General

Price quoted for joint & crack filler/sealer shall be net per gallon, furnished, delivered, heated, and applied by the contractor at the locations indicated herein. Price calculations, if any, will be calculated on the basis of the material actually furnished. Work Zone Traffic Control, cleaning of cracks, and disposal of debris shall be included in the price quoted per gallon of crack sealer.

The contractor is to furnish all necessary labor and equipment to complete the indicated projects except that the State will supervise and control the operation. The equipment supplied to complete the crack sealing projects shall conform with the specifications included in this Invitation for Bids.

3.3 Asphalt Price Adjustment

3.3.1 General

- a. Asphalt price adjustments allowed will be based on the October 1, 2017 average of the F.O.B. terminal price per ton of unmodified PG 64S-22 binder without anti-stripping agent (base average F.O.B. terminal price). The new monthly average terminal price will be determined by the New York State Department of Transportation based on prices of preapproved primary sources of performance graded binder in accordance with the New York State Department of Transportation Standard Specifications.

The October 1, 2017 average is \$421.000 per ton

NOTE: The same grade of asphalt cement used in establishing the base average F.O.B. terminal price shall be used in establishing the new average F.O.B. terminal price.

In the event that one or more of the New York State Department of Transportation pre-approved sources discontinue posting a price for asphalt cement, the base average F.O.B. terminal **price shall not be recalculated.**

- b. The new average F.O.B. terminal price will be determined based on the above F.O.B. terminal prices posted on the 20th of each month, hereafter known as the “Adjustment Date”, during the contract period. However, asphalt price adjustments, in accordance with the formula below, will be effective for deliveries made on and after the first of the month following the adjustment date.
- c. The unit prices of liquid bituminous materials purchased from any award based on this specification will be subject to adjustment based on the following formula:

Price Adjustment (per gallon)	=	$\frac{\text{New Monthly Average FOB Terminal Price} - \text{Base Average Terminal Price}}{235}$	X	Total Allowable Petroleum %
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Positive Price Adjustment number shall be added to original per gallon Bid Price.

Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

New Monthly Average F.O.B. Terminal Price

The average F.O.B. terminal price for unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation per New York State Department of Transportation Standard Specification.

Base Average F.O.B. Terminal Price

The average F.O.B. terminal price of unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation as of October 1, 2017.

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

Total Allowable Petroleum

The percentage of total allowable petroleum for each item is as follows:

Material Designation	Grade	Asphalt %	Petroleum Allowance %	Total Allowable Petroleum %
ASTM D6690 Type II		56	0.2	56.2%

Asphalt Price Adjustments will not be allowed for materials which do not have an asphalt cement base.

- d. Work performed after the expiration of the contract, where no extension has been granted, resultant from purchase orders placed prior to expiration of the contract will receive the Asphalt Price Adjustments applicable in effect during the last month of the contract.
- e. Asphalt Price Adjustments for any contracts that are extended will be based on the new average for the month in which the work is done applying the same base established for that contract.
- f. Asphalt price adjustments allowed by this contract shall be calculated and applied to the original prices. There will not be asphalt price adjustments unless the change amounts to more than \$0.100 per ton/\$0.010 per gallon as applicable from the original price. In these instances, prices will revert back to the original prices.
- g. All Asphalt Price Adjustments will be computed to three decimal places.
- h. Should these provisions result in a price structure which becomes unworkable, detrimental or injurious to the State or in prices which are not truly reflective of market conditions or which are deemed by the Commissioner to be unreasonable or excessive, and no adjustment in price is mutually agreeable, the Commissioner reserves the sole right upon ten business days written notice mailed to the Contractor to terminate any contract resulting from this bid opening.
- i. All asphalt price adjustments shall be published by the State and issued to all contract holders whose responsibility will be to attach the appropriate State notification (based on when the work was performed) to the payment invoice submitted to agency

3.3.2 Asphalt Price Adjustment: Example

This example is for illustration purposes only. Actual Base Average Price, etc., may vary:

Item ASTM D6690 Type II

Base Avg. Price per Ton = \$421.000

New Avg. Price per Ton = \$431.000

Total Allowable Petroleum = 56.2%

$$\begin{array}{|c|} \hline \text{Price} \\ \text{Adjustment} \\ \text{(per gallon)} \\ \hline \end{array} = \frac{(431.000 - 421.000)}{235} \times \begin{array}{|c|} \hline 0.562 \\ \hline \end{array}$$

$$\begin{array}{|c|} \hline \text{Price} \\ \text{Adjustment} \\ \text{(per gallon)} \\ \hline \end{array} = +\$0.024 \text{ per gallon}$$

Positive Price Adjustment number shall be added to original per gallon Bid Price.

Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

3.4 Payment

Payment for crack filler/sealer shall be made at contract price per gallon for the actual quantities furnished to and verified by the receiving agency. This determination as to quantities involved in any contract shall be accepted as final and binding upon the Contractor. A delivery slip stating quantities shall accompany each shipment. An invoice shall be sent promptly by the Contractor to the Engineer of the Region placing the order. Measurement shall be based on the volume of crack filler/sealer at a temperature of 60°F. The method to be used for volume corrections shall be the method and coefficients of expansion given in the "Standard Petroleum Tables, A.S.T.M. D1250".

3.5 Pre-Crack Sealing Conference

The contractor shall coordinate a schedule for a Pre-Crack Sealing Conference with the Resident Engineer (RE), Resident Operation Engineer (ROE) and his or her project quality Assurance Representative within one month after the award of the contract and at least two weeks prior to the start of the crack sealing. At this conference the contractor shall present Certificates of Insurance evidencing compliance with the additional Insurance Requirements set forth in the INSURANCE clause, their proposed crack sealing schedule, equipment, and crack sealing procedure and Work Zone Traffic Control Plan to the State for approval. At least one week prior to the start of crack sealing, the contractor shall coordinate the details of the crack sealing with the Resident Engineer.

3.6 Supervision

The Department of Transportation shall provide supervision for the crack sealing operation, and pavement marking abrading if applicable. The Resident Engineer shall designate a Project Supervisor who shall be in responsible charge of the operation. All orders pertaining to Work Zone Traffic Control plan from the Project Supervisor to the contractor shall be binding on the contractor. The following portions of Section 105 - CONTROL OF WORK of the Standard Specifications shall apply to these projects: 105-01 ENGINEER'S AUTHORITY, 105-05 VENDOR RESPONSIBILITY, 105-06 COOPERATION WITH UTILITIES AND OTHER CONTRACTORS.

3.7 Work Hours

Work shall not be permitted on Sundays and NYS Holidays. If the contractors desire to work overtime on other days, dispensation from NYS Labor Department must be obtained using Department of Labor Form PW-30 (06/17). Night work is prohibited unless agreed to by the Contractor and NYS Department of Transportation. All Overtime Dispensations requests shall be submitted to the Resident Engineer or his/her designee at the preconstruction meeting.

3.8 Construction Details

The construction details shall comply with the requirements specified herein, including those appearing in the enclosed Attachment 10 - *Detailed Specifications – Liquid Bituminous Materials*. The project supervisor from the State shall have sole responsibility for determining compliance with the specifications. All orders given to the contractor regarding construction details shall be considered final.

3.9 Restoration Disturbed Areas

During the course of the work the vendor shall take reasonable care not to disturb areas outside the existing pavement. Any areas disturbed by the vendor shall be returned to their original condition at no expense to the State. Any and all debris generated as part of the work shall be removed by the Vendor upon completion of the project.

3.10 Damaged or Deficient Areas

Prior to acceptance and payment by the State for work under this contract, any placed pavement that ravels, delaminates, fails to properly cure, or is in any way defective shall be redone to the satisfaction of the State at the contractor's expense.

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

3.11 Work Zone Traffic Control

The contractor shall be responsible for Work Zone Traffic Control. Traffic shall be controlled in accordance with Manual of Uniform Traffic Control Devices (MUTCD), Section 619-1 through 619-3 of the Standard Specifications as described herein including modifications to the Standard Specifications. The contractor shall submit a Work Zone Traffic Control Plan for approval to the Resident Engineer at the Pre-Work conference. For two-way roadways, Figures TAST-C1R, TAST-C2R, TAST-C3R, TAST-C4R, TAST-C5R, TAST-C7R, TAST-C1UL, TAST-C2UL, TAST-C3UL, TAST-C4U, TAST-C7UL, TAST-C1UH, TAST-C2UH, TAST-C3UH, and TAST-C7UH included in this document may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way roadways, Figures TAST-C5UL, TAST-C6UL, TAST-C8UL, TAST-C5UH, TAST-C6UH, and TAST-C8UH may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way Freeways or Expressways, Figures TAST-E1, TAST-E2, TAST-E3, TAST-E4, TAST-E5, TAST-E6, and TAST-E7 may be used as a basis for development of a Work Zone Traffic Control Plan.

All necessary flaggers for Work Zone Traffic Control shall be provided by the Contractor. For two-way roadways, a minimum of three flaggers shall be provided while the work operation is underway. One shall be stationed at each end of the applicable operation and one shall be stationed with the operation. For one-way roadways, a minimum of two flaggers shall be provided while work operation is underway. One shall be stationed at the beginning of the applicable operation and one shall be stationed with the operation. The Contractor shall station flaggers such that communication is maintained between the flaggers. Hand signals, radios, pilot vehicles, or some other means of communication may be used subject to the approval of the Resident Engineer.

All costs of Work Zone Traffic Control as prescribed by this specification including flagging, temporary pavement marking and/or delineation, and construction signs, are to be included in the unit price bid. No separate payment shall be made.

3.11.1 Temporary Construction Signs

The vendor shall provide temporary construction signs as specified in Section 619-1 through 619-3 of the Standard Specifications and in the MUTCD. All costs for Work Zone Traffic Control including flagging, construction signs and shadow vehicles are to be included in the price per gallon. No separate payment shall be made.

3.11.2 Shadow Vehicle Requirements

The shadow vehicles shall have a gross vehicle weight of 18,000 lb. to 20,000 lb. each. The shadow vehicles shall be equipped with a combination of four (4) rotary lights and strobes, two front and two rear and four (4) flashing amber lights, two (2) front and two (2) rear. All equipment on the shadow vehicle furnished under this contract shall be in full compliance with the latest edition of the New York State Vehicle and Traffic Law, Article 9, Sections 375 and 376. The shadow vehicles shall each be equipped with a Mobile Construction Zone Impact Attenuator, as per Section 712-06 of the NYSDOT Standard Specifications, and one Type B Arrow Panel, as described in Section 294.5 of the MUTCD. Contractor shall supply all necessary operators for the shadow vehicles.

3.11.3 Special Note: Work Zone Intrusion Initiative

As part of the Department of Transportation's Work Zone Intrusion Initiative, the following countermeasures shall apply to this Invitation for Bids.

Channelizing Device Spacing Reduction

A maximum channelizing device spacing of 40 ft. shall be provided at work sites where workers are exposed to traffic. This spacing shall be maintained a reasonable distance upstream of workers, and shall be used throughout the work zone.

Where tapers are located less than 500 ft. from the work site, the 40-ft. spacing shall be used in the tapers as well.

Drums or vertical panels are preferred for intermediate to long-term stationary work zones, and at any locations where the risk of intrusion is high. Traffic cones are normally adequate for work zones set up and removed on a daily basis.

In long lane or shoulder closures, at least two channelizing devices shall be placed transversely at maximum 800 ft. intervals to discourage traffic from driving through the closed lane. Transversely placed devices are not required where pilot car are in use. Frequent checks shall be made to reset channelizing devices dislodged by traffic.

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

Flagger Station Enhanced Setups

Additional cones and a flag tree meeting Section 6F.62 of the MUTCD shall be used upstream of flagger stations to provide added warning to drivers. These devices shall be used for flagger stations except those that are constantly moving or are in use at one location for no more than a few minutes. If the W20-7a Flagger sign is used, the additional cones and flag tree shall also be used.

For additional details on Flagger Station Enhanced Setups, see Work Zone Traffic Control drawings in this Invitation for Bids.

Temporary Rumble Strips

a. Description

This work shall consist of the installation, maintenance and subsequent removal of temporary rumble strips in paving work zones where indicated in the Invitation for Bids or as directed by the Engineer.

b. Materials

Rumble strips shall be either constructed in place from a raised strip of asphalt concrete or constructed in place with removable pavement marking tape. Raised removable tape rumble strips shall be formed by applying four layers of removable black non-reflectorized removable pavement marking tape. The tape shall be applied to a clean, dry pavement surface in accordance with the manufacturer's recommendations. The pavement surface shall be cleaned with compressed air just prior to application of the tape. Raised asphalt rumble strips shall be formed from hot mix asphalt meeting the requirements of Items 402.058903 or 402.098903. Tack coat meeting the requirements of Materials Designation 702-XXXXT Asphalt Emulsion Diluted Tack Coat shall be used to adhere the rumble strip to the existing pavement. Temporary rumble strips shall be formed using a specially constructed rumble strip paver (drag box) pulled transversely across the pavement, or by hand placement between forms fixed to the pavement. If forms are used, they shall be removed prior to compaction of the asphalt mixture. Compaction shall be accomplished using a plate tamper or a static roller. The roadway surface on which the rumble strips are to be attached shall be dry, free of surface contaminants such as dust or oil, and shall be 45°F or greater unless otherwise authorized by the Engineer. The pavement surface shall be cleaned with compressed air just prior to tack coating and subsequent installation of rumble strips.

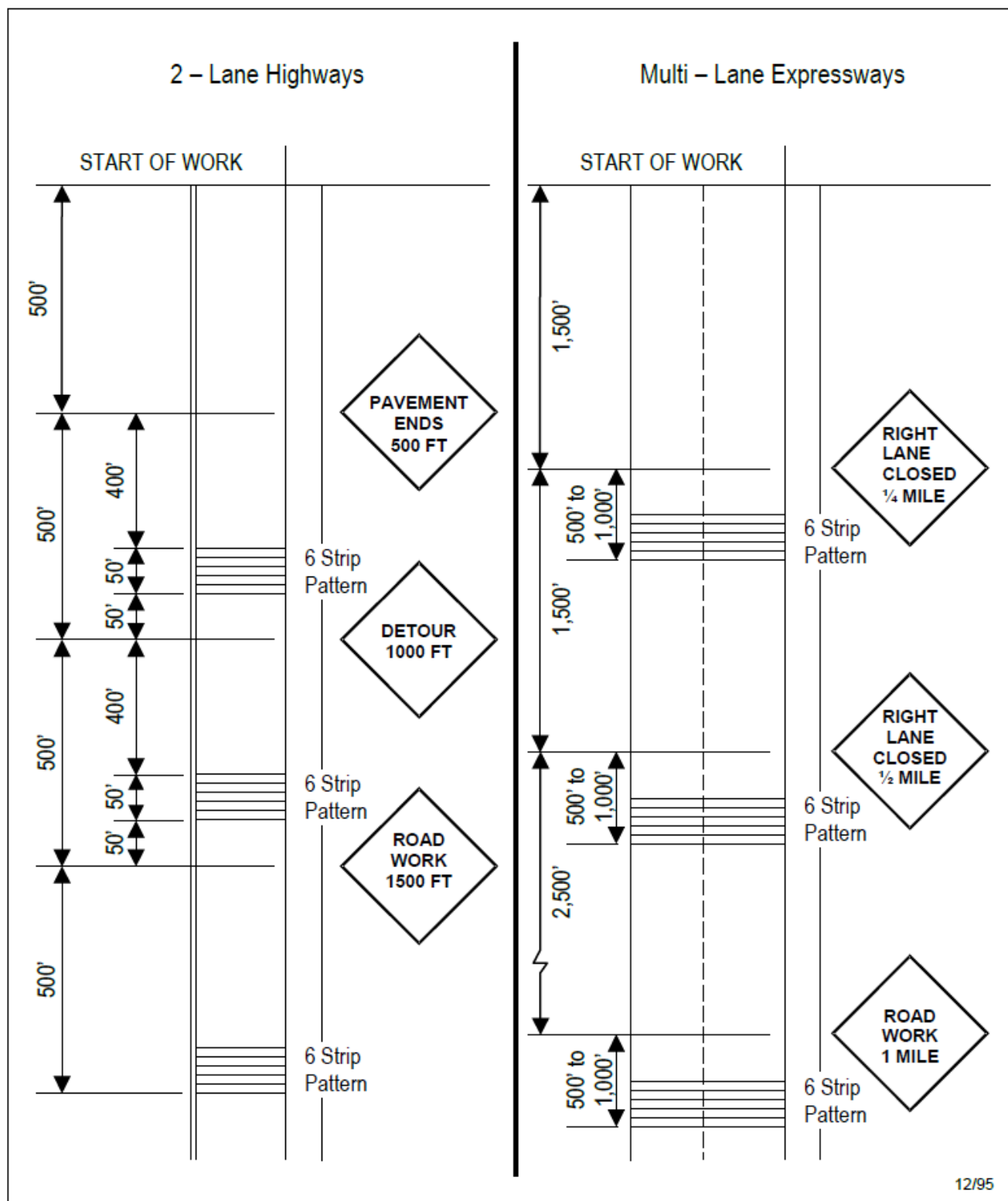
Temporary rumble strips shall be placed in a succession of three 6-Strip Patterns according to the attached "Suggested Layout Details - Temporary Rumble Strips". Each strip shall be placed on 10 foot centers and traversing the full width of each travel lane. On curbed roadways, rumble strips shall end a minimum of 3 feet from the curb so as to not interfere with drainage. Rumble strips shall be between 6 inches and 9 inches in width and have a final compacted thickness of 0.4 inches \pm 0.1 inches.

Any raised rumble strips that fail to adhere to the pavement, or become damaged or flattened such that, in the opinion of the Engineer, they are no longer performing their intended function, shall be replaced or repaired by the Contractor to the satisfaction of the Engineer. Any associated damage to the pavement shall also be repaired by the Contractor to the satisfaction of the Engineer. These replacements or repairs shall be made at no additional expense to the Purchasing Agency.

When directed by the Engineer, (e.g., prior to the start of the winter plowing season), or prior to the placement of successive pavement courses, the Contractor shall completely remove the rumble strips from the pavement. Rumble strips shall be removed upon completion of work and concurrently with the removal of other temporary traffic control signs and devices. Any pavement that is damaged in the process of removing the rumble strips shall be repaired by the Contractor to the satisfaction of the Engineer at no additional expense to the Purchasing Agency.

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

Suggested Layout Details -- Temporary Rumble Strips



SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

c. Basis of Payment

All costs for the installation, maintenance and removal of temporary rumble strips are included in the price per ton or square yard as appropriate. No separate payment shall be made.

d. Suggested Layout Details Drawing-- Temporary Rumble Strips

See the Suggested Layout Details Drawing in the previous page.

3.12 Special Notes – Crack Sealing

3.12.1 Funding Source (Crack Sealer)

Projects 5V18CS, 6M1801, 9CRS81, 9CRS82, 9CRS83, and 9CRS84 will be funded by Federal Aid.

Project 4T5317 is a State funded project.

3.12.2 NYSDOT REGION 4 Special Notes (Crack Sealing)

Project 4T5317 – Cracksealing

1. The purpose of this project is to seal the cracks and joints in the paved roadway areas at various locations in Region 4. This work shall consist of cleaning and sealing the cracks and joints in the HMA pavement and shoulders.
2. The Contractor shall furnish for the Engineer's use, two ambient air thermometers and two "gun type" pavement thermometers per work crew. After completion of the project construction, the Engineer will return the thermometers back to the Contractor.
3. Pavement Markings: The Contractor shall use care when filling cracks and/or joints near existing pavement markings, to keep from obscuring its intended function or reflectivity. Centerline, lane line, and gore markings shall not be covered or obscured. If the Engineer determines, the pavement markings are covered or obscured, the Contractor shall restore the markings to their original condition at no additional cost to the State.
4. The application of sealant shall be allowed if the ambient temperature is between 40 degrees and 85 degrees Fahrenheit.
5. Preconstruction crack sealing meeting is required at least one week prior to start of any work. The meeting will discuss the intent of the work to ensure all parties understand the procedures to be followed. The Contractor should be prepared to discuss work staging, schedule, work zone traffic control, and overall procedures for completing work. The following people shall attend the meeting:
 - a. Contractor Superintendent
 - b. Crack Sealing Personnel
 - c. Resident Engineer
 - d. EIC/Inspection Staff
 - e. Regional Materials Engineer
 - f. Contractor Work Zone Traffic Control Supervisor
 - g. Regional Construction Safety Coordinator and/or Representative from Operations division (Traffic and Safety Group)
6. Coordination with other projects- The Contractor shall coordinate their work so as not to conflict with other projects occurring within or abutting the contract limits

3.12.3 NYSDOT REGION 5 Special Notes (Crack Sealing)

Time Restrictions

All Region 5 Projects shall follow the time restrictions outlined in the "Work Zone Traffic Control - for Design/Construction on State Highways in Region 5" available on the NYSDOT website or through the Regional Transportation Systems Operations group excepting those projects listed on the Region 5 project specific special notes.

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

3.12.4 NYSDOT REGION 6 Special Notes (Crack Sealing)

No work shall be permitted, to minimize travel delays associated with major holidays, during the following periods:

- Friday, May 25, 2018-sunrise, Tuesday, May, 29, 2018.
- Tuesday, July 3, 2018- sunrise, Thursday, July 5, 2018.
- Friday, August 31, 2018- sunrise, Tuesday, September 4, 2018.

The Region requests all Preconstruction paperwork be submitted electronically (after award) as pdf files to Karen.Patterson@dot.ny.gov prior to the preconstruction meeting, or all documentation be brought to the Preconstruction meeting electronically as pdf files on a CD or USB “thumb” drive that will not be returned to the contractor.

All Region 6 Crack Seal projects shall be completed no later than October 31, 2018. A schedule reflecting this shall be submitted before start of work to the Region’s ARDO, Karen Patterson, for approval.

All Region 6 Crack Seal projects on I86, I390, Rt 17, and Rt 15 shall follow R6-TAST-1L and R6-TAST-1R WZTC plans attached.

All crack seal sites denoted as “(concrete)” are only intended to receive crack seal at the longitudinal joint between the concrete pavement and the asphalt guiderail strip.

A map depicting the Region 6 Regional Priority Network Restricted Area is attached. No lanes closures are permitted in the restricted area Monday thru Friday, between the hours of 3:00PM and 6:00PM without the expressed written approval of the Regional Traffic Engineer, or his designee.

3.12.5 NYSDOT REGION 9 Special Notes (Crack Sealing)

Project 9CRS84 – Route 434, 26, and 17C –VPP (Night Time Work)

This is a night-time operation project. The hours of lane closures and work activity will be restricted to the hours between 10:00 PM to 7:00 AM from 10:00 PM Sunday to 7:00 PM Friday.

3.13 Detailed Specifications – Crack Sealing

Please, see Attachment 10 – *Detailed Specifications – Liquid Bituminous Materials*.

SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

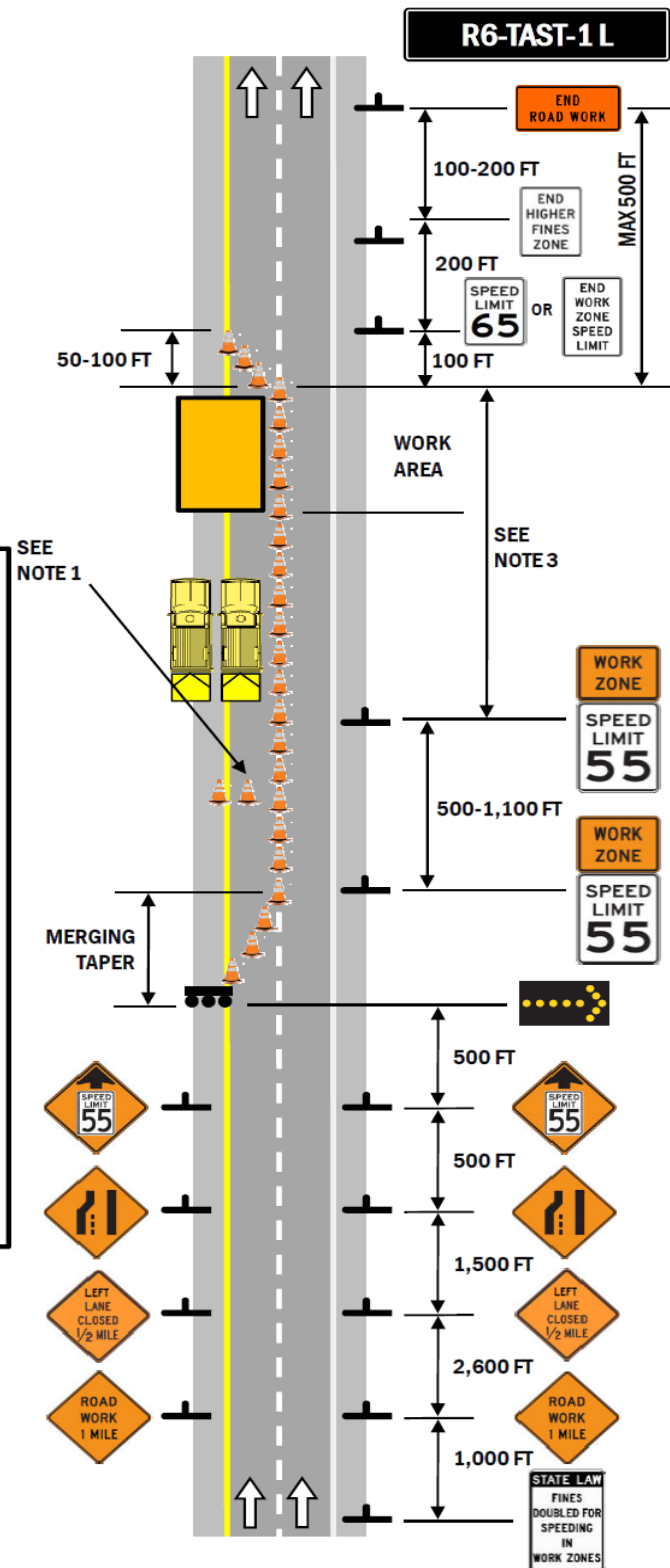
NOT TO SCALE

NOTES:

- For lane closures over 1,500 FT in length, two (2) channelizing devices shall be placed in the closed lane at 750 FT maximum spacing.
- Existing speed limit signs that conflict with a reduced speed limit in a work zone (beginning of merging taper to end of work zone) must be completely covered or removed when a reduced speed limit is in effect.
- Unless an existing "SPEED LIMIT 65" sign is located within 1,000 FT of the downstream end of the work zone, an R2-1 "SPEED LIMIT 65" sign shall be posted 100 FT beyond the work zone on the right side only.
- For long work zones, repeat the work zone speed limit signs at ½ mile intervals.
- State Law (NYR9-12) and End Higher Fines Zone (R2-12) signs are optional if anticipated work duration is less than 4 hours. If used, NYR9-12 shall be placed 1,000 FT in advance of initial warning signs. R2-11 sign shall be placed 200 ft after R2-1 or R2-12 signs.

	W20-1 48 in x 48 in		R2-1 36 in x 48 in
	W20-5 L 48 in x 48 in		NYR9-12 48 in x 72 in
	W4-2 L 48 in x 48 in		R2-11 36 in x 48 in
	W3-5 48 in x 48 in		R2-12 36 in x 54 in
	G20-2 36 in x 18 in		Arrow Board
	G20-5aP 36 in x 24 in		Work Area
	Work Vehicle with Attenuator		

NYSDOT
WORK ZONE TRAFFIC CONTROL
WORK ZONE SPEED LIMIT
FOR A LEFT LANE CLOSURE
(WORK AREA LESS THAN ½ MILE FROM MERGING TAPER)
SHORT-TERM OR INTERMEDIATE TERM STATIONARY
ON FREEWAY
(POSTED AT 65 MPH)
MARCH 2012 R6-TAST-1 L
















SECTION 3: CRACK SEALER - SPECIFIC PROJECTS (Cont'd)

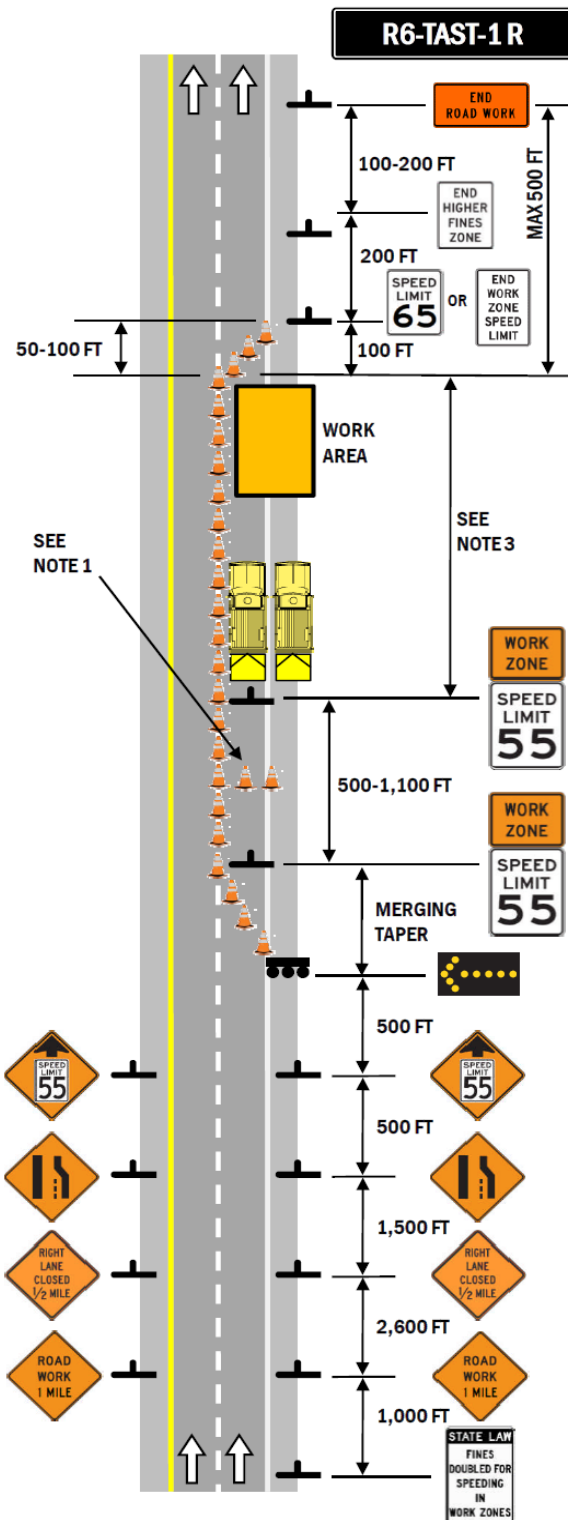
NOT TO SCALE

NOTES:

- For lane closures over 1,500 FT in length, two (2) channelizing devices shall be placed in the closed lane at 750 FT maximum spacing.
- Existing speed limit signs that conflict with a reduced speed limit in a work zone (beginning of merging taper to end of work zone) must be completely covered or removed when a reduced speed limit is in effect.
- Unless an existing "SPEED LIMIT 65" sign is located within 1,000 FT of the downstream end of the work zone, an R2-1 "SPEED LIMIT 65" sign shall be posted 100 FT beyond the work zone on the right side only.
- For long work zones, repeat the work zone speed limit signs at ½ mile intervals.
- State Law (NYR9-12) and End Higher Fines Zone (R2-12) signs are optional if anticipated work duration is less than 4 hours. If used, NYR9-12 shall be placed 1,000 FT in advance of initial warning signs. R2-11 sign shall be placed 200 ft after R2-1 or R2-12 signs.

	W20-1 48 in x 48 in		R2-1 36 in x 48 in
	W20-5 R 48 in x 48 in		NYR9-12 48 in x 72 in
	W4-2 R 48 in x 48 in		R2-11 36 in x 48 in
	W3-5 48 in x 48 in		R2-12 36 in x 54 in
	G20-2 36 in x 18 in		Arrow Board
	G20-5aP 36 in x 24 in		Work Area
	Work Vehicle with Attenuator		

NYSDOT
WORKZONE TRAFFIC CONTROL
WORKZONE SPEED LIMIT
FOR A RIGHT LANE CLOSURE
(WORK AREA LESS THAN ½ MILE FROM MERGING TAPER)
SHORT-TERM OR INTERMEDIATE TERM STATIONARY
ON FREEWAY
(POSTED AT 65 MPH)
AUGUST 2014 R6-TAST-1 R



SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS

4.1 Introduction

Micro-surfacing is a pavement preventive maintenance treatment which offers minor improvements to rideability and has excellent friction characteristics.

4.2 Pricing Information

4.2.1 General

Price quoted for micro-surfacing shall be net per ton, furnished, hauled, delivered, and applied with Contractor's equipment totally by the Contractor at locations indicated herein. The price quoted for micro-surfacing per ton shall also include abrading the existing pavement markings, the provision of Work Zone Traffic Control as indicated elsewhere in this Invitation for Bids and Maintenance Materials Bond as listed in the *Maintenance Materials Bonds* section in this Invitation for Bids. Price calculations, if any, will be calculated on the basis of the material actually furnished.

4.3 Asphalt Price Adjustments

4.3.1 General

- a. Asphalt price adjustments allowed will be based on the October 1, 2017 average of the F.O.B. terminal price per ton of unmodified PG 64S-22 binder without anti-stripping agent (base average F.O.B. terminal price). The new monthly average terminal price will be determined by the New York State Department of Transportation based on prices of preapproved primary sources of performance graded binder in accordance with the New York State Department of Transportation Standard Specifications.

The October 1, 2017 average is \$421.000.

NOTE: The same grade of asphalt cement used in establishing the base average F.O.B. terminal price shall be used in establishing the new average F.O.B. terminal price.

In the event that one or more of the New York State Department of Transportation pre-approved sources discontinue posting a price for asphalt cement, the base average F.O.B. terminal **price shall not be recalculated.**

- b. The new average F.O.B. terminal price will be determined based on the above F.O.B. terminal prices posted on the 20th of each month, hereafter known as the "Adjustment Date", during the contract period. However, asphalt price adjustments, in accordance with the formula below, will be effective for deliveries made on and after the first of the month following the adjustment date.
- c. The unit prices of liquid bituminous materials purchased from any award based on this specification will be subject to adjustment based on the following formula:

Price Adjustment (Per Ton)	=	$\left(\begin{array}{c} \text{New Monthly Average} \\ \text{F.O.B. Terminal Price} \end{array} - \begin{array}{c} \text{Base Average F.O.B.} \\ \text{Terminal Price} \end{array} \right)$	X	Total Allowable Petroleum %
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Positive Price Adjustment number shall be added to original per gallon Bid Price.

Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

New Monthly Average F.O.B. Terminal Price

The average F.O.B. terminal price for unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation per New York State Department of Transportation Standard Specification.

Base Average F.O.B. Terminal Price

The average F.O.B. terminal price of unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation as of October 1, 2017.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

Total Allowable Petroleum

The percentage of total allowable petroleum for each item is as follows:

Item #	Material Designation	Asphalt %	Petroleum Allowance %	Total Allowable Petroleum %
413.02010118	Microsurfacing, Type II, F1	9.0	0.2	9.2
413.02020118	Microsurfacing, Type II, F2	9.0	0.2	9.2
413.02030118	Microsurfacing, Type II, F3	9.0	0.2	9.2
413.03010118	Microsurfacing, Type III, F1	7.5	0.2	7.7
413.03020118	Microsurfacing, Type III, F2	7.5	0.2	7.7
413.03030118	Microsurfacing, Type III, F3	7.5	0.2	7.7
413.04030118	Microsurfacing, Type III Rut Filling	7.5	0.2	7.7

Asphalt Price Adjustments will not be allowed for materials which do not have an asphalt cement base.

- d. Work performed after the expiration of the contract, where no extension has been granted, resultant from purchase orders placed prior to expiration of the contract will receive the Asphalt Price Adjustments applicable in effect during the last month of the contract.

Asphalt Price Adjustments for any contracts that are extended will be based on the new average for the month in which the work is done applying the same base established for that contract.

- e. Asphalt price adjustments allowed by this contract shall be calculated and applied to the original prices. There will not be asphalt price adjustments unless the change amounts to more than \$0.100 per ton/\$0.010 per gallon as applicable from the original price. In these instances, prices will revert back to the original prices.
- f. All Asphalt Price Adjustments will be computed to three decimal places.
- g. Should these provisions result in a price structure which becomes unworkable, detrimental or injurious to the State or in prices which are not truly reflective of market conditions or which are deemed by the Commissioner to be unreasonable or excessive, and no adjustment in price is mutually agreeable, the Commissioner reserves the sole right upon ten business days written notice mailed to the Contractor to terminate any contract resulting from this bid opening.
- h. All asphalt price adjustments shall be published by the State and issued to all contract holders whose responsibility will be to attach the appropriate State notification (based on when the work was performed) to the payment invoice submitted to agency

4.3.2 Asphalt Price Adjustment: Example

This example is for illustration purposes only. Actual Base Average Price, etc., may vary:

Item 18410.1021

Base Average Price = \$421.000

New Average Price = \$431.000

% Total Allowable Petroleum = 9.2%

Price Adjustment (per ton)	=	(431.000 - 421.000)	X	0.092
Price Adjustment (per ton)	=	+\$0.920 per ton		

Positive Price Adjustment number shall be added to original per gallon Bid Price.

Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.4 Payment

Payment for micro-surfacing shall be made at contract prices per net ton for the actual quantity of material placed by the Contractor and actual numbers of gallons of bituminous materials for fog seal (if used).

Payment for work zone traffic control and abrading the existing pavement markings shall be included in the payment for the number of tons of completed micro-surfacing

A delivery slip stating quantities of micro-surfacing shall accompany each shipment. An invoice listing the quantities of micro-surfacing in place shall be sent promptly by the contractor to the address indicated on the purchase order.

4.5 Pre- Micro-Surfacing Conference

The contractor shall schedule a Pre-Micro-Surfacing Conference with the affected Resident Engineer within one month after award of the Contract and at least two weeks prior to the start of the micro-surfacing. Project level supervisors for both the owner agency and the Vendor should be present at this conference. At this conference the contractor shall present Certificates of Insurance evidencing compliance with the additional insurance requirements set forth in the INSURANCE clause, their proposed micro-surfacing schedule, equipment, pavement marking abrading plan, mix design, calibration, micro-surfacing procedure, and Work Zone Traffic Control plan to the State for approval. At least one week prior to the start of micro-surfacing, the Vendor shall coordinate the details of the project with the Resident Engineer.

4.6 Bonding Requirements – Micro-Surfacing

A Maintenance Bond is required for micro-surfacing projects in this IFB. Please see sample in Attachment 10 - *Detailed Specifications – Liquid Bituminous Materials*.

4.7 Supervision

The Department of Transportation shall provide supervision for the micro-surfacing operation, and pavement marking abrading if applicable. The Resident Engineer shall designate a Project Supervisor who shall be in responsible charge of the operation. All orders pertaining to Work Zone Traffic Control plan from the Project Supervisor to the contractor shall be binding on the contractor. The following portions of Section 105 - CONTROL OF WORK of the Standard Specifications shall apply to these projects: 105-01 ENGINEER'S AUTHORITY, 105-05 VENDOR RESPONSIBILITY, 105-06 COOPERATION WITH UTILITIES AND OTHER CONTRACTORS.

4.8 Work Hours

Work shall not be permitted on Sundays and NYS Holidays. If the contractors desire to work overtime on other days, dispensation from NYS Labor Department must be obtained using Department of Labor Form PW-30 (06/17). Night work is prohibited unless agreed to by the Contractor and NYS Department of Transportation. All Overtime Dispensations requests shall be submitted to the Resident Engineer or his/her designee at the preconstruction meeting.

4.9 Construction Details

The construction details shall comply with the requirements specified herein, including those appearing in the enclosed Attachment 10 - *Detailed Specifications – Liquid Bituminous Materials*. The project supervisor from the State shall have sole responsibility for determining compliance with the specifications. All orders given to the contractor regarding construction details shall be considered final.

4.10 Special Note for Micro-surfacing

The Contractor will not be responsible for the initial conditioning of the existing pavement and shoulder surfaces as described in Section 402-3.05 of the NYSDOT Standard Specifications. Patching, joint repair, crack filling will be done by NYSDOT forces prior to the micro-surfacing, chip seal or paver placed surface treatment project. However, once work on the project begins, the Contractor is responsible for keeping the pavement and shoulders clean until the paving operations are completed, as per Section 633-3.01 of the NYSDOT Standard Specifications.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.11 Restoration of Disturbed Areas

During the course of the work the vendor shall take reasonable care not to disturb areas outside the existing pavement. Any areas disturbed by the vendor shall be returned to their original condition at no expense to the State. Any and all debris generated as part of the work shall be removed by the Vendor upon completion of the project.

4.12 Damaged or Deficient Areas

Prior to acceptance and payment by the State for work under this contract, any placed pavement that ravels, delaminates, fails to properly cure, or is in any way defective shall be redone to the satisfaction of the State at the contractor's expense.

4.13 Work Zone Traffic Control

The contractor shall be responsible for Work Zone Traffic Control. Traffic shall be controlled in accordance with Manual of Uniform Traffic Control Devices (MUTCD), Section 619-1 through 619-3 of the Standard Specifications as described herein including modifications to the Standard Specifications. The contractor shall submit a Work Zone Traffic Control Plan for approval to the Resident Engineer at the Pre-Work conference. For two-way roadways, Figures TAST-C1R, TAST-C2R, TAST-C3R, TAST-C4R, TAST-C5R, TAST-C7R, TAST-C1UL, TAST-C2UL, TAST-C3UL, TAST-C4U, TAST-C7UL, TAST-C1UH, TAST-C2UH, TAST-C3UH, and TAST-C7UH included in this document may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way roadways, Figures TAST-C5UL, TAST-C6UL, TAST-C8UL, TAST-C5UH, TAST-C6UH, and TAST-C8UH may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way Freeways or Expressways, Figures TAST-E1, TAST-E2, TAST-E3, TAST-E4, TAST-E5, TAST-E6, and TAST-E7 may be used as a basis for development of a Work Zone Traffic Control Plan.

All necessary flaggers for Work Zone Traffic Control shall be provided by the Contractor. For two-way roadways, a minimum of three flaggers shall be provided while the work operation is underway. One shall be stationed at each end of the applicable operation and one shall be stationed with the operation. For one-way roadways, a minimum of two flaggers shall be provided while work operation is underway.

One shall be stationed at the beginning of the applicable operation and one shall be stationed with the operation. The Contractor shall station flaggers such that communication is maintained between the flaggers. Hand signals, radios, pilot vehicles, or some other means of communication may be used subject to the approval of the Resident Engineer.

All costs of Work Zone Traffic Control as prescribed by this specification including flagging, temporary pavement marking and/or delineation, and construction signs, are to be included in the unit price bid. No separate payment shall be made.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.13.1 Permanent Construction Signs

The Contractor shall provide construction signs as specified in Section 619-1 through 619-3 of the Standard Specifications and in the MUTCD. At minimum the Contractor shall install the following permanent construction signs:

SIGN	MINIMUM SIZE	LOCATION
ROAD WORK NEXT _____ MILES	<u>G20-1</u> Conventional 36" x 18" Freeways 48" x 24"	On main line upstream of project in each direction
END ROAD WORK	<u>G20-2</u> Conventional 36" x 18" Freeways 48" x 24"	On main line after end of project in each direction
ROAD WORK AHEAD	<u>W20-1</u> Conventional 36" x 36" Freeways 48" x 48"	On main line in advance of the affected highway segment in each direction and on major intersecting roads 300 -500 feet in advance of main line. Sign should be covered if it conflicts with temporary signing in the vicinity. (Place between the G20-1 and the first warning sign that states condition- i.e. W8-12, W8-9 or W8-15)
DO NOT PASS	<u>R4-1</u> Conventional 24" x 30"	If 2'x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign at or within 100 feet of the beginning of the unmarked area, second within 1,000 feet and subsequent signs, spaced every ½ mile along project in each direction
NO CENTER LINE	<u>W8-12</u> Conventional 36" x 36"	If 2'x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign in advance of the condition and the first "DO NOT PASS" sign: 300' urban is preferred (100' minimum), 500' rural is preferred (200' minimum). Place additional signs spaced every 2 miles on mainline in each direction and after every major intersecting road.
LOW SHOULDER	<u>W8-9</u> Conventional 36" x 36" Freeways 48" x 48"	Place on mainline spaced every 2 miles along project in each direction and after every major intersecting road until shoulder back-up is installed (if conditions warrant use, place between the W8-12 and R4-1, maintaining a minimum of 200' between signs for rural roads and 100' on urban. The W8-12 can be moved upstream to accommodate the required spacing.)
GROOVED PAVEMENT	<u>W8-15</u> Conventional 36" x 36" Freeways 48" x 48"	On any roadway 500 feet in advance of rebates milled under this contract, but not paved. Remove or cover after paving rebate.

**All signs should maintain an absolute minimum spacing of 200' rural or 100' urban. 500' is preferred on rural and 300' is preferred on urban. Double stacking of any of the above signs, or combination thereof, will NOT be permitted.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

Major intersecting roads are defined as through State, County, Town, Village, or City roads. The Contractor may provide Portable signs as shown in Figure 6F-2 of the MUTCD and meeting the requirements of Section 619 of the Standard Specifications for lane closures during work hours. Signs left active at night shall be rigid and reflectorized in accordance with the Standard Specifications.

With prior permission of the State's Resident Engineer, the Vendor may provide portable signs as shown in Figure 6F-2 of the MUTCD for the above referenced DO NOT PASS and NO CENTER LINE signs. The Contractor shall be responsible for assuring that these signs will be in their upright, visible positions twenty-four hours a day, seven days a week while 2' X 4" temporary yellow markings are used instead of full barrier pavement markings

4.13.2 Temporary Pavement Markings

The Contractor shall install and maintain temporary pavement markings on any paved surface without permanent pavement markings before opening it to traffic, before nightfall or before the end of the work day, whichever comes soonest except for areas that are open during the work shift with channelizing devices or flaggers. Temporary pavement markings shall meet the requirements of Section 619 of the Standard Specifications except that two-lane, two-way highways may be left without full barrier centerlines in no passing zones for a maximum of 7 calendar days provided that NO CENTER LINE (W8-12, black on orange), NO PASSING ZONE (W14-3, black on orange pennant shaped sign), and DO NOT PASS (R4-1) signs are used consistent with the MUTCD and in conjunction with yellow 2 foot by 4 inch temporary markings consisting of retroreflective removable pavement marking tape, paint or yellow temporary overlay markers installed on a 40 ft. cycle to delineate the centerline location.

The State is responsible for the final pavement markings unless otherwise indicated in the contract. If the vendor chooses to install NO CENTER LINE and DO NOT PASS signs and temporary yellow 2 foot by 4 inch pavement markings in lieu of full barrier centerline markings, the signs shall be left in place until the state has completed installing the final pavement markings. The state will normally complete final pavement markings within 7 days of the project completion. However, if unavoidable situations delay the pavement marking installation the signs shall remain in place for 14 calendar days after the project has been completed or until the state has completed installing the final pavement markings, whichever comes first. If permanent pavement marking cannot be installed within 14 days of the project completion, state must install interim pavement marking including center lines, edge lines, stop bars, and simple crosswalks with no hatching before the end of 14 days after project completion.

All costs for Work Zone Traffic Control including flagging, temporary pavement markings, delineation, and construction signs are to be included in the prices bid per ton or square yard as applicable.

4.13.3 Abrading Existing Pavement Markings

The Contractor shall remove any epoxy or thermoplastic pavement markings. Other markings shall be removed as ordered by the Resident Engineer. Care shall be taken to avoid damage to passing traffic. All damage to passing traffic caused by the Contractor's operations shall be the Contractor's responsibility. Waste material generated by the abrading operation shall be cleaned up and disposed of by the Vendor.

When the Contractor abrades the existing pavement markings, the Contractor shall place temporary pavement markings as specified elsewhere in this Invitation for Bids under Work Zone Traffic Control, unless the paving material will be placed the same day as pavement markings are abraded. The Contractor shall make every effort to expeditiously place the paving material in areas where pavement markings have been abraded and temporary pavement markings are in place. Under no circumstances will temporary pavement markings be allowed for more than five calendar days in areas where pavement markings have been abraded. In this event, the Contractor shall be required to place full pavement markings at no cost to the state. During the pavement markings abrading operation, traffic will be controlled by the Contractor in accordance with the Work Zone Traffic Control requirements included herein. The Contractor shall submit a proposed Traffic Control Plan to the Resident Engineer for approval. The plan may be based on the Work Zone Traffic Control drawings included in this Invitation for Bids.

Payment for pavement marking abrading shall be included in the price bid per ton of micro-surfacing. No separate payment shall be made.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.13.4 Special Note: Work Zone Intrusion Initiative

As part of the Department of Transportation's Work Zone Intrusion Initiative, the following countermeasures shall apply to this Invitation for Bids.

Channelizing Device Spacing Reduction

A maximum channelizing device spacing of 40 ft. shall be provided at work sites where workers are exposed to traffic. This spacing shall be maintained a reasonable distance upstream of workers, and shall be used throughout the work zone.

Where tapers are located less than 500 ft. from the work site, the 40-ft. spacing shall be used in the tapers as well.

Drums or vertical panels are preferred for intermediate to long-term stationary work zones, and at any locations where the risk of intrusion is high. Traffic cones are normally adequate for work zones set up and removed on a daily basis.

In long lane or shoulder closures, at least two channelizing devices shall be placed transversely at maximum 800 ft. intervals to discourage traffic from driving through the closed lane. Transversely placed devices are not required where pilot car are in use.

Frequent checks shall be made to reset channelizing devices dislodged by traffic.

Flagger Station Enhanced Setups

Additional cones and a flag tree meeting Section 6F.62 of the MUTCD shall be used upstream of flagger stations to provide added warning to drivers. These devices shall be used for flagger stations except those that are constantly moving or are in use at one location for no more than a few minutes. If the W20-7a Flagger sign is used, the additional cones and flag tree shall also be used.

For additional details on Flagger Station Enhanced Setups, see Work Zone Traffic Control drawings in this Invitation for Bids.

Temporary Rumble Strips

a. Description

This work shall consist of the installation, maintenance and subsequent removal of temporary rumble strips in paving work zones where indicated in the Invitation for Bids or as directed by the Engineer.

b. Materials

Rumble strips shall be either constructed in place from a raised strip of asphalt concrete or constructed in place with removable pavement marking tape. Raised removable tape rumble strips shall be formed by applying four layers of removable black non-reflectorized removable pavement marking tape. The tape shall be applied to a clean, dry pavement surface in accordance with the manufacturer's recommendations. The pavement surface shall be cleaned with compressed air just prior to application of the tape. Raised asphalt rumble strips shall be formed from hot mix asphalt meeting the requirements of Items 402.058903 or 402.098903. Tack coat meeting the requirements of Materials Designation 702-XXXXT Asphalt Emulsion Diluted Tack Coat shall be used to adhere the rumble strip to the existing pavement. Temporary rumble strips shall be formed using a specially constructed rumble strip paver (drag box) pulled transversely across the pavement, or by hand placement between forms fixed to the pavement. If forms are used, they shall be removed prior to compaction of the asphalt mixture. Compaction shall be accomplished using a plate tamper or a static roller. The roadway surface on which the rumble strips are to be attached shall be dry, free of surface contaminants such as dust or oil, and shall be 45°F or greater unless otherwise authorized by the Engineer. The pavement surface shall be cleaned with compressed air just prior to tack coating and subsequent installation of rumble strips.

Temporary rumble strips shall be placed in a succession of three 6-Strip Patterns according to the attached "Suggested Layout Details - Temporary Rumble Strips". Each strip shall be placed on 10 foot centers and traversing the full width of each travel lane. On curbed roadways, rumble strips shall end a minimum of 3 feet from the curb so as to not interfere with drainage. Rumble strips shall be between 6 inches and 9 inches in width and have a final compacted thickness of 0.4 inches \pm 0.1 inches.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

Any raised rumble strips that fail to adhere to the pavement, or become damaged or flattened such that, in the opinion of the Engineer, they are no longer performing their intended function, shall be replaced or repaired by the Contractor to the satisfaction of the Engineer. Any associated damage to the pavement shall also be repaired by the Contractor to the satisfaction of the Engineer. These replacements or repairs shall be made at no additional expense to the Purchasing Agency.

When directed by the Engineer, (e.g., prior to the start of the winter plowing season), or prior to the placement of successive pavement courses, the Contractor shall completely remove the rumble strips from the pavement. Rumble strips shall be removed upon completion of work and concurrently with the removal of other temporary traffic control signs and devices. Any pavement that is damaged in the process of removing the rumble strips shall be repaired by the Contractor to the satisfaction of the Engineer at no additional expense to the Purchasing Agency.

c. Basis of Payment

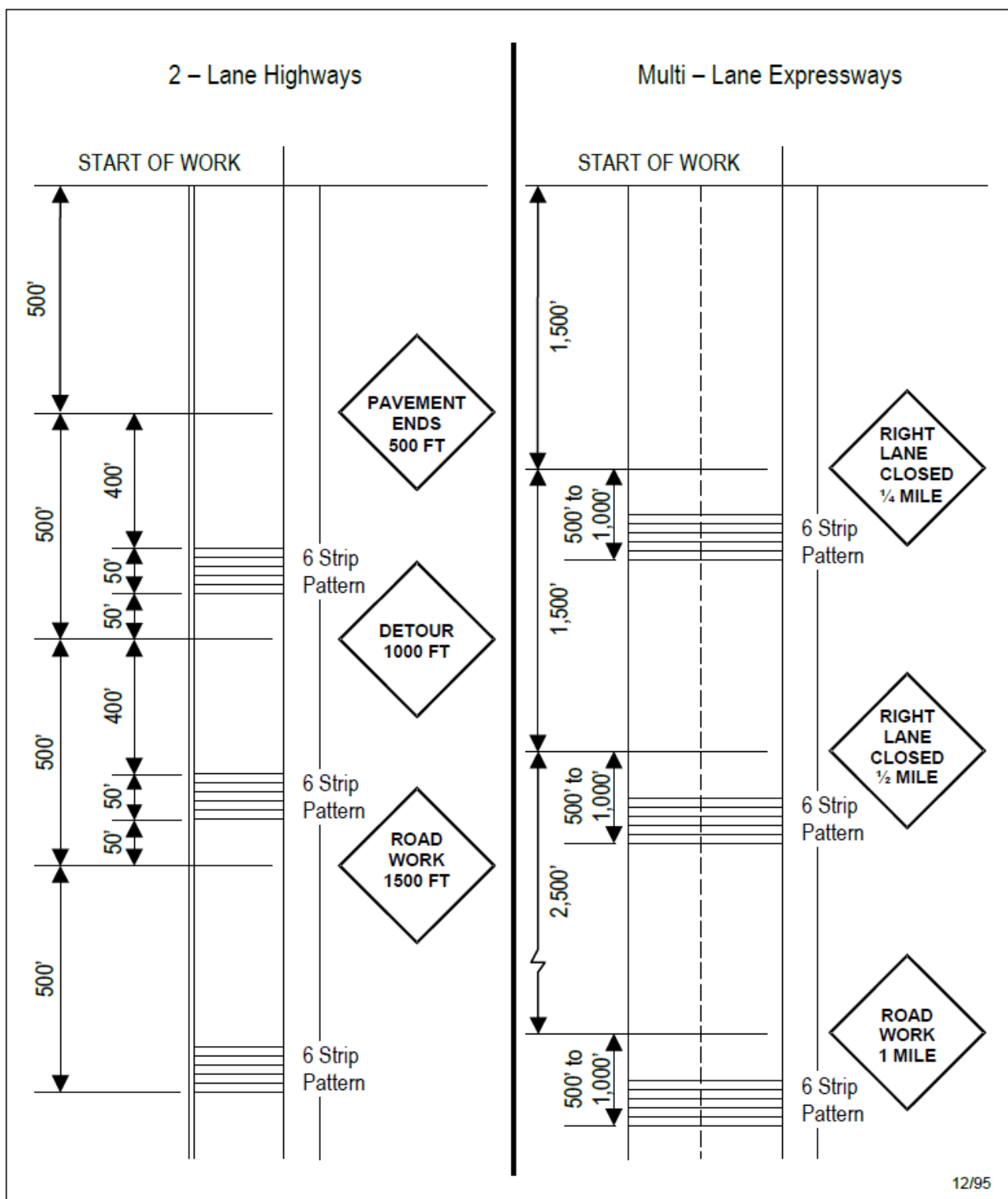
All costs for the installation, maintenance and removal of temporary rumble strips are included in the price per ton or square yard as appropriate. No separate payment shall be made.

d. Suggested Layout Details Drawing-- Temporary Rumble Strips

See the Suggested Layout Details Drawing in the **next page**.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

Suggested Layout Details -- Temporary Rumble Strips



SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.14 Special Notes – Micro-surfacing

4.14.1 Funding Source (Micro-surfacing)

Project 439074, 449040, 6V1832, and 7M1812 will be funded by Federal Aid.

Projects 402070, 403963, 409670, 402131, and 426108 are 100% State funded.

4.14.2 Special Note – Rail Road Involvement in 100% State funded projects

Bidders are advised that there may be active at grade railroad crossings within the limits of projects in this Invitation for Bids. The following at grade railroad crossings have been identified, but there may be others within the limits of these projects that have not been identified:

Project Number	County	Route	Rail Road Name	Location
409670	Ontario	96	Finger Lakes RR	RM 96-4404-1159 Crossing # 362613C

At the identified at grade crossings, and any other active at grade railroad crossings encountered on the projects in this Invitation for Bids, the contractor shall coordinate with the corresponding Rail Road as per follows:

COORDINATION WITH RAILROAD(S)

The Contractor shall note that this project may require close coordination with a railroad and railroad protective flagging services

Description

The Contractor shall conduct its work and handle its equipment such that no part of any material or equipment shall foul a track, catenary, electrical facility or signal facility without written permission from the chief engineer of the railroad company(s) affected. A track is fouled when any object is brought within 7.62 M (25') of the centerline of the track or the nearest point of a railroad's catenary, electrical facility or signal facility.

Construction Details

In the event the Contractor's work does foul a railroad facility the Contractor shall obtain a permit in order to enter railroad property and to cover the costs of the railroad's force account services. The Contractor will not be allowed to enter onto the railroad's property to perform contract work, nor will the railroad provide services occasioned by the Contractor's operations unless the Contractor notifies the Railroad and receives the railroad's prior approval. A railroad will not provide any services necessitated by the Contractor's operations until the permit is obtained. These railroad's costs will include, but may not be limited to costs incurred by the railroad to provide flaggers, spotters, engineering services, administrative services, construction inspection, or other labor, material or equipment necessary to provide a safe environment for both the Contractor's and Railroad's forces.

The Contractor is advised that a railroad may not be able to provide flag persons on a daily basis due to the railroad's operational necessities. The Contractor shall coordinate and schedule his construction activities with the railroad's engineer no later than two weeks prior to the start of the work, in consultation with the State's Engineer-in-Charge, so that a workable schedule can be formulated and agreed upon. In addition to the above, the Contractor shall also comply with the current Standard Specifications §105-09 WORK AFFECTING RAILROADS.

Basis of Payment

All costs incurred by the contractor to comply with the requirements in this Special Note shall be included in the price bid per ton of micro-surfacing. No extra payment shall be made.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.14.3 NYSDOT REGION 4 General Special Notes (Micro-surfacing)

REGION 4 General Special Notes

1. Contractor shall use non-vibratory rolling over culverts or known utilities within the project limits or as ordered by the engineer in charge. Specific locations for non-vibratory rolling will be discussed at the pre-microsurfacing meeting.
2. Prior to the start of work, the contractor shall inventory all pavement markings and provide the engineer with a copy of the inventory. As part of a pavement marking program update, the Regional Traffic and Safety group is reviewing all pavement markings within the limits of paving projects. Upon their review, there may need to be adjustments to the pavement marking layout. The contractor shall be responsible for completing striping layout, including changes as indicated by the Regional Traffic and Safety Group.
3. The contractor shall remove any plowable reflective markers in the pavement, if present, prior to paving. The hole left in the existing pavement, shall then be filled with a hot mix asphalt material; 9.5 mixture, or mixture approved by the Resident Engineer. Cost to be included in the bid price for the associated project.
4. Some projects may require loop detectors to be re-established prior to or once microsurfacing has been completed. This shall be done by others and coordinated by the Resident Engineer.
5. The installation of temporary rumble strips at the beginning of each project work zone shall be at the discretion of the engineer.
6. Any and all debris generated as part of the work shall be removed by the Vendor within five days of completion of microsurfacing operations.

REGION 4 Temporary Lane closure Restrictions for Major Holidays

There shall be no temporary lane closures on roadway facilities owned and/or maintained by NYSDOT on the major holidays listed below.

Construction activities that will result in temporary lane closures shall be suspended to minimize travel delays associated with road work for major holidays as follows:

2018

<u>Memorial Day</u> - Monday May 28.	Beginning 6:00 AM Friday, May 25 and ending 6:00 AM Tuesday, May 29.
<u>Independence Day</u> - Wednesday July 4.	Beginning 6:00 AM Tuesday, July 3 and ending 6:00 AM Thursday, July 5.
<u>Labor Day</u> - Monday, September 3.	Beginning 6:00 AM Friday, August 31 and ending 6:00 AM Tuesday, September 4.

Project 402070 – Genesee County (Route 20)

1. This project is a microsurfacing project. From RM 20-4103-1000 to 1036 the microsurfacing will be applied to the travel lanes only. From RM 20-4103-1036 to 1038 the microsurfacing will be applied to the full pavement width from curb to curb including the radiuses on Route 20 at the intersection of Route 77.
2. Time Restrictions:
 - a) On dates Darien Lake Theme Park has Special Events, Contractor shall stop and remove all operations on Route 20, by 14:00. Darien Lake Theme Park Special Event dates for 2018 are not known at this time. Project awarded contractor will be given a list of Special event dates at the preconstruction meeting.
 - b) Major Holiday Lane Restriction Special Note applies to this project.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.14.3 NYSDOT REGION 4 General Special Notes (Micro-surfacing) (Cont'd)

3. This project requires the use of pilot cars to lead vehicles through alternating one-way traffic work zones **of any length**. The pilot vehicles shall be equipped with the following: Contractors name prominently displayed on the sides of the vehicle; PILOT CAR FOLLOW ME, G20-4, 36" x 18" sign mounted on the rear of the vehicle; flashing or rotating amber beacon meeting the requirements of Section 619-3.02 F of the Standard Specifications; communication device, such as two-way radio.

The use of a pilot vehicle **does NOT** exempt the requirement of channelizing devices or any other traffic control measure required for a flagging operation. Cost of the pilot vehicle shall be included in the price bid for Item 413.02020118.

4. Abrading of pavement centerline, fog lines, special markings, and associated Work Zone Traffic Control, shall be included in the bid price for Item 413.02020118.

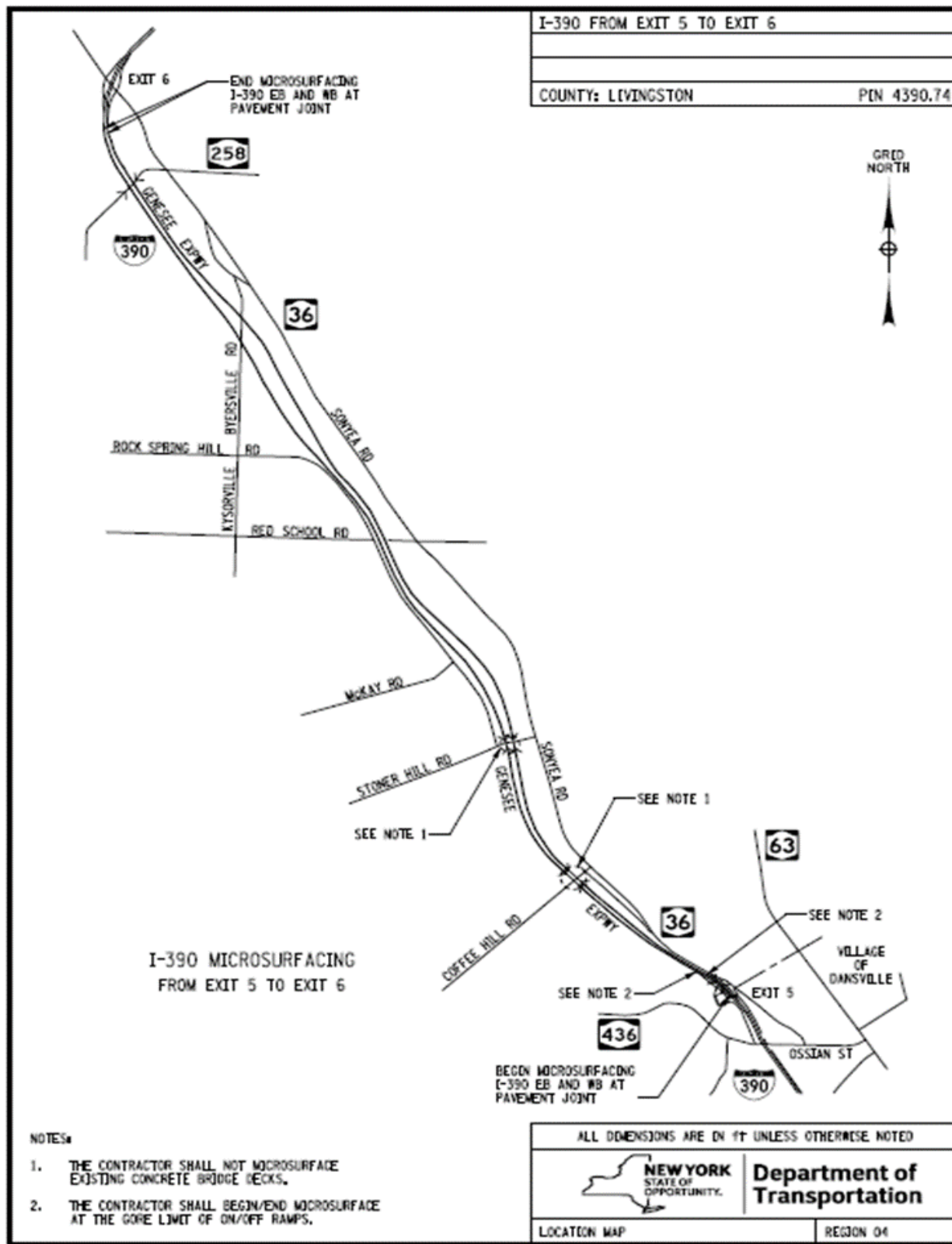
Project 403963 – Wyoming County (Route 39)

1. This project is a microsurfacing project. Microsurfacing will only include the travel lanes. Shoulders will not be resurfaced.
2. Time Restrictions:
 - a. Major Holiday Lane Restriction Special Note applies to this project.

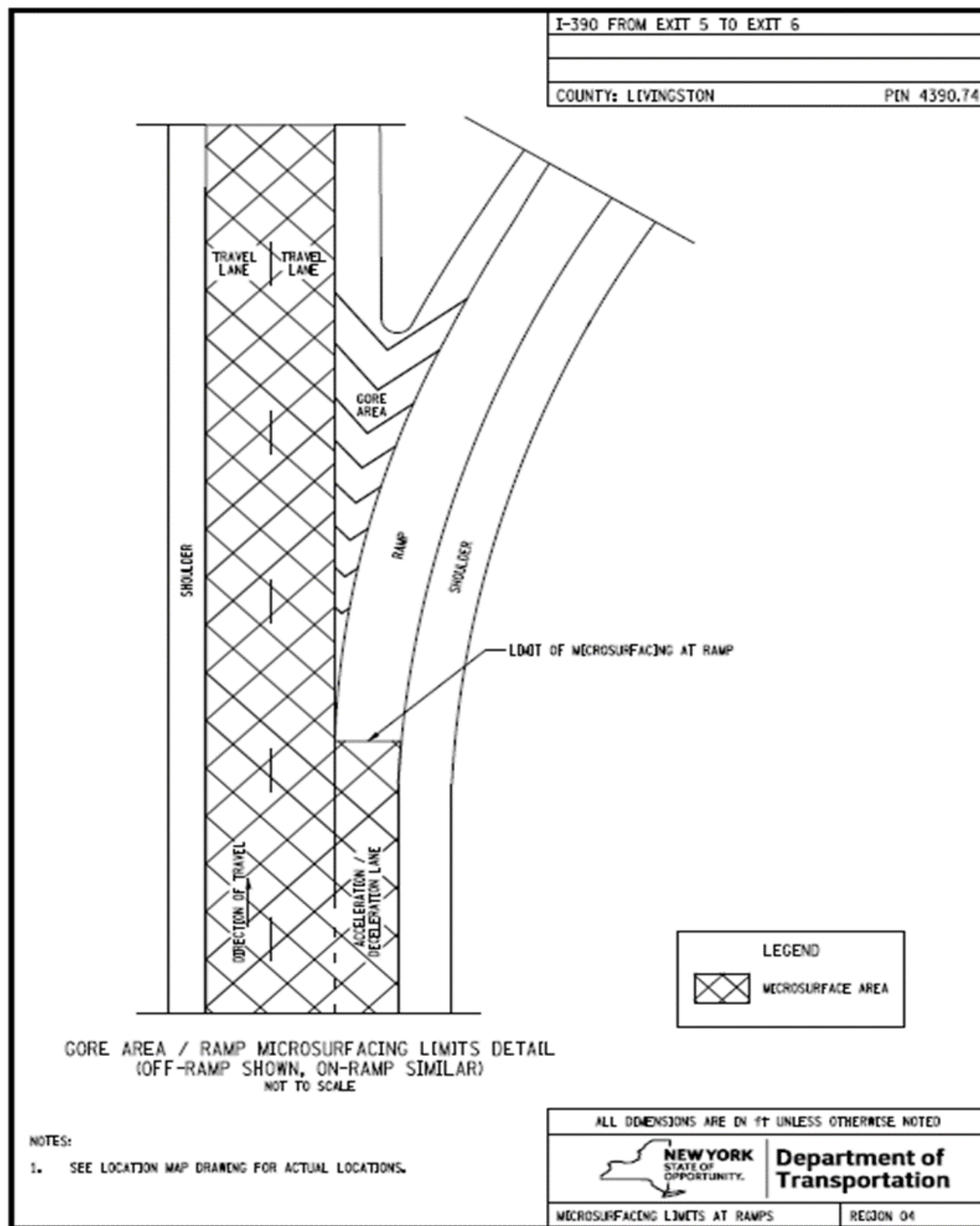
Project 439074 – Livingston County (I-390)

1. This project is a microsurfacing project. Microsurfacing will only include the travel lanes. Shoulders will not be resurfaced. Refer to attached location map and detail for illustration of proposed limits of work.
2. Time Restrictions:
 - a) Major Holiday Lane Restriction Special Note applies to this project.
3. Abrading of broken lane line striping, and associated Work Zone Traffic Control, shall be included in the bid price for Item 413.02020118.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)



SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)



SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.14.3 NYSDOT REGION 4 General Special Notes (Micro-surfacing) (Cont'd)

Project 402131 – Ontario County (Route 21)

1. This project is a microsurfacing project. Microsurfacing will include both travel lanes and shoulders.
2. Time Restrictions:
 - a) Major Holiday Lane Restriction Special Note applies to this project.

Project 409670 – Ontario County (Route 96)

1. This project is a microsurfacing project. Microsurfacing will only include the travel lanes. Shoulders will not be resurfaced.
2. Time Restrictions:
 - a) Major Holiday Lane Restriction Special Note applies to this project.
3. Work must be coordinated with the work being completed on Route 21 and the Thruway Exit.
4. There is an at-grade RR crossing at RM 96-4404-1159, Crossing #362613C. The contractor shall coordinate with the RR after being awarded and prior to working at this location. The RR is the Finger Lakes RR and their contact is Jon Gadsby, (315) 374-5792, jongadsby@fingerlakesrail.com.

Project 426108 – Monroe County (Route 261)

1. This project is a microsurfacing project. From RM 261-4301-1000 to RM 261-4301-1025 and RM 18-4303-1151 to RM 261-4301-1076 the microsurfacing will be applied to the travel lanes and shoulders. From RM 261-4301-1025 to RM 18-4303-1151 (curb section) the microsurfacing will be applied to the travel lanes only.
2. Time Restrictions:
 - a) Rte104 to Parma Center Rd – Flagging Prohibited 4-6 PM
 - b) Parma Center Rd to LOSP – No Time Restrictions
 - c) Major Holiday Lane Restriction Special Note applies to this project.
3. Abrading of pavement centerline, fog lines, special markings, and associated Work Zone Traffic Control, shall be included in the bid price for Item 413.02020118.

Project 449040 – Monroe County (I-490)

1. This project is a microsurfacing project. Microsurfacing will only include the travel lanes. Shoulders will not be resurfaced. Refer to attached location maps and detail for illustration of proposed limits of work.
2. Abrading of broken lane line striping, and associated Work Zone Traffic Control, shall be included in the bid price for Item 413.02020118.

Work Zone Traffic Control (WZTC) Requirements

The following information is intended to provide WZTC parameters and requirements to the Contractor for completing work on this project.

WZTC Plans

1. The Contractor will be required to develop proposed WZTC plans for this project. The Contractor shall submit his schedule and procedure for lane closures to the EIC for approval from the Regional Traffic Engineer or designee three (3) weeks prior to work at that location. The Contractor shall note the following:
 - a. Several locations within the project limits will require site specific WZTC plans to be developed.
 - b. Other locations will utilize WZTC requirements detailed on the following:
 - NYSDOT WZTC 619 Standard Sheets
 - NYSDOT WZTC Manual, Short Duration Operations (TASD – XX details)
 - NYSDOT WZTC Manual, Short Term Operations (TAST – XX details)
 - c. All ramp closures will be subject to time restrictions as approved by the Regional Traffic Engineer or designee.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.14.3 NYSDOT REGION 4 General Special Notes (Micro-surfacing) (Cont'd)

Project 449040 – Monroe County (I-490) (Cont'd)

Time Restrictions (Mainline)

I-490 Eastbound (I-390 to Winton Road)

- Single Lane Closures Prohibited M-F, 7-9 AM & 3-7 PM
- Double Lane Closures Prohibited M-F, 6 AM – 8 PM

I-490 Westbound (I-390 to Inner Loop Ramps)

- Single Lane Closures Prohibited M-F, 7-9 AM & 3-6 PM
- Double Lane Closures Prohibited M-F, 6 AM – 8 PM

I-490 Westbound (Inner Loop Ramps to Winton Road)

- Single Lane Closures Prohibited M-F, 6-10 AM & 3-7 PM
- Double Lane Closures Prohibited M-F, 6 AM – 8 PM

1. The time restrictions listed are to be implemented throughout the duration of the project. No deviations are allowed without prior approval from the Regional Traffic Engineer or designee. If, in the opinion of the EIC or the Traffic Management Center (TMC), short term lane closures are creating excessive delays to traffic or are creating a safety concern due to slow or stopped traffic, the closures shall be removed and the roadway opened to traffic.
2. The time restrictions listed are based on anticipated traffic volumes. If, at the time of construction, the traffic volumes appear to allow extended work hours, an adjustment to the time restrictions may be proposed. Any requests for revisions to the time restrictions shall be submitted in writing to the EIC for approval by the Regional Traffic Engineer or designee. Bidders should not assume that revisions to the stated time restrictions will be permitted.

Date Restrictions

In addition to the Major Holiday date restrictions listed in the “*Temporary Lane Closure Restrictions for Major Holidays*” special note, the following date restrictions apply to this project. No work requiring the closing of lanes, or ramps shall be permitted on the following dates:

- St. Patrick's Day Parade (March 17)
- Lilac Festival (Saturday May 12 & 19, Sunday May 13 & 20)
- Rochester International Jazz Festival (Saturday June 23 & 30, Sunday June 24)
- Corn Hill Arts Festival (Saturday July 14, Sunday July 15)
- Park Avenue Summer Art Festival (Saturday August 4, Sunday August 5)
- Puerto Rican Festival (Dates TBD)
- Clothesline Arts Festival (Saturday, September 8, Sunday September 9)
- Rochester Fringe Festival (Saturday September 15 & 22, Sunday September 16)

Any requests for revisions to the above date restrictions shall be submitted in writing to the EIC for approval by the Regional Traffic Engineer or designee.

Project Sequence of Operations

The contractor shall progress microsurfacing work in the following manner:

1. Left lane microsurface completed using a left lane closure.
2. Center lane microsurface completed using a double left lane closure.
3. Right lane paving completed using a right lane closure and ramp shifts and/or ramp closures.

Any variation from this requirement requires approval from the EIC.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.14.3 NYSDOT REGION 4 General Special Notes (Micro-surfacing) (Cont'd)

Project 449040 – Monroe County (I-490) (Cont'd)

Project Coordination

The Contractor shall coordinate their work so as not to conflict with other projects occurring within or abutting the contract limits. This includes but is not limited to any work by other contractors, utility companies, municipalities or maintenance operations.

The following NYSDOT projects will be under construction during construction of this contract:

- *D263387 – I-390 / I-490 Interchange Improvements – Phase 2*
Project EIC: Leonard Davison Phone #: (585) 254-2582
- *PIN 4940.K4 – Mt. Read Blvd. Improvements from Buffalo Rd (Rt. 33) to Lyell Ave (Rt. 31)*
Project EIC: TBD Phone #: (585) 272-3340

In addition, the Contractor will be responsible to coordinate their work with other projects/maintenance/work operations that may arise during construction.

Portable Variable-Message Signs (PVMS)

The contractor shall provide a minimum of three (3) PVMS units and shall be included in the bid price for Item 413.02020118.

Two (2) PVMS units shall be placed, one each at the project limits, for a period of one (1) week prior to the beginning of work to provide advanced notification to the traveling public and shall remain in place until contract work is complete. PVMS placement shall be approved by the EIC. PVMS shall be updated as work progresses providing the traveling public with up to date information. Text message(s) for the signs shall be approved by the EIC.

One (1) PVMS unit shall be provided for use at all ramp closure locations, as necessary, or in other situations, AOB. PVMS placement and text message(s) shall be approved by the EIC.

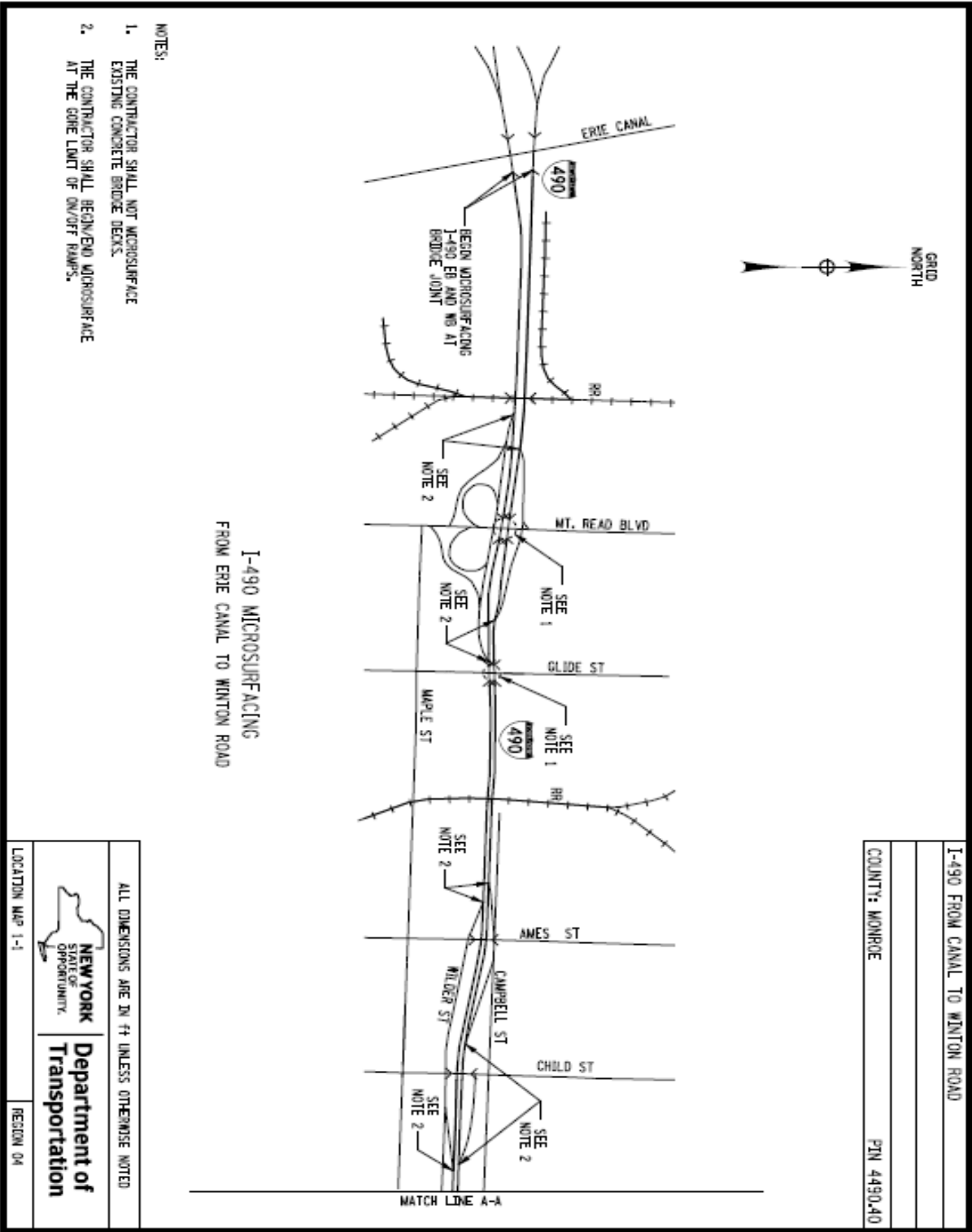
All PVMS units used on the project shall be *National Transportation Communication for ITS Protocol* (NTCIP) compliant. This allows the Department to remotely operate the PVMS from the Regional Traffic Operations Center (RTOC). Coordination with RTOC will be required to determine which NTCIP compliant PMVS units are capable of communicating with RTOC.

Coordination with Regional Traffic Operations Center (RTOC)

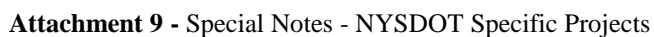
The Contractor is advised that the RTOC will provide support to the Work Zone Traffic Control scenarios included in the Contract. To do so there will need to be coordination among the Engineer, Contractor, and RTOC with respect to the use of the Dynamic Message Signs (DMS) and Highway Advisory Radio (HAR) in the project area. Control of the permanent overhead DMS and HAR is performed at RTOC and these devices supplement the Traffic Control Devices included in these contract documents. It is anticipated that the development of messages and the scheduling of their broadcast will primarily be the responsibility of the Engineer and operations staff at the RTOC. However, there may be occasion when the Contractor will be asked to provide input and coordinate directly with RTOC staff.

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

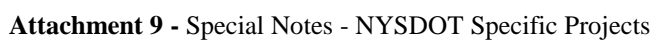
4.14.3 NYSDOT REGION 4 General Special Notes (Micro-surfacing) (Cont'd)
Project 449040 – Monroe County (I-490) (Cont'd)



Project 449040 – Monroe County (I-490) (Cont'd)



Project 449040 – Monroe County (I-490) (Cont'd)



4.14.3 NYSDOT REGION 4 General Special Notes (Micro-surfacing) (Cont'd)

I-490 FROM CANAL TO WINTON ROAD	
COUNTY: MONROE	PIN 4490.40

GORE AREA / RAMP MICROSURFACING LIMITS DETAIL
(OFF-RAMP SHOWN, ON-RAMP SIMILAR)
NOT TO SCALE

SECTION 4: MICRO-SURFACING - SPECIFIC PROJECTS (Cont'd)

4.14.4 NYSDOT REGION 6 Project Specific Notes (Micro-surfacing)

No work shall be permitted, to minimize travel delays associated with major holidays, during the following periods:

- Friday, May 25, 2018-sunrise, Tuesday, May, 29, 2018.
- Tuesday, July 3, 2018- sunrise, Thursday, July 5, 2018.
- Friday, August 31, 2018- sunrise, Tuesday, September 4, 2018.

The Region requests all Preconstruction paperwork be submitted electronically as .pdf files to Karen.Patterson@dot.ny.gov prior to the preconstruction meeting, or all documentation be brought to the Preconstruction meeting electronically as .pdf files on a CD or USB “thumb” drive that will not be returned to the contractor.

In lieu of longitudinal cones full project length between open and closed lanes of traffic, the contractor may elect to substitute, when using pilot vehicles, use of cones placed transversely across the closed lane at intervals per section 619-3.02 J.2 (every 800') and at strategic locations, such as intersections and driveways.

All Region 6 Micro-Surfacing projects shall be completed no later than October 31, 2018. A schedule reflecting this shall be submitted before start of work to the Region's ARDO, Karen Patterson, for approval.

Paint with beads is the only option permitted in Region 6 for temporary and interim pavement markings, unless approved on a case by case basis by the Resident Engineer. Offset the centerline temporary/interim pavement markings so that the permanent markings will cover up the temporary/interim markings, as follows: 8" centerline offset for 2 lane roads, 6" centerline offset for multi-lane roadways.

All stockpile, spoils, and clean-out sites need to be preapproved by the Regional Maintenance Environmental Coordinator, Ruth Hart, prior to use.

4.15 Detailed Specifications – Micro-surfacing

Please, see Attachment 10 – *Detailed Specifications – Liquid Bituminous Materials*

4.15.1 Project Dimensions - Micro-surfacing

Information on pavement widths for projects in this Invitation for Bids is listed for informational purposes only. The dimensions listed are the best information available, but 100% accuracy is not guaranteed. Bidders should visit the project site to confirm the dimensions given and familiarize themselves with the project particulars before submitting a bid. The Department assumes no responsibility for erroneous information listed herein.

The pavement width listed is the total width of all the travel lanes only.

The shoulder width is for one shoulder only.

Project Number	Item	Travel Lanes Width (feet) (total)	Lane Width (feet) (one lane)	Shoulder Width (feet) (one shoulder)	Number of Lanes
439074	413.02020118	48	12	-	4
449040	413.02020118	Varies 48-108	12	-	Varies 4-9
402070	413.02020118	Varies 24-36	12	Varies 0-8	Varies 2-3
403963	413.02030118	Varies 23-24	11.5-12	-	2
409670	413.02020118	Varies 24-36	12	-	Varies 2-3
402131	413.02030118	22	11	4	2
426108	413.02020118	Varies 24-36	12	Varies 2-3	Varies 2-3
6V1832	413.02020118	22	11	2.5 - 4	2
7M1812	413.02030118	22, 40	11, 20	0 - 6	2

SECTION 5: PAVER PLACED SURFACE TREATMENT - SPECIFIC PROJECTS

5.1 Introduction

Paver Placed Surface Treatment (Conventional or Modified) is a preventive maintenance treatment used to preserve highway pavements. The treatment is a surface paving system, placed by a self-priming paver, where a modified emulsion tack coat is placed directly before the application of a conventional or rubber modified hot mix asphalt wearing course.

5.2 Pricing Information

5.2.1 General

Price quoted for Paver Placed Surface Treatment shall be net per ton, furnished, heated, delivered, and applied with contractor's equipment totally by the contractor at locations indicated herein. The price bid per ton for the Paver Placed Surface Treatment shall also include abrading the existing pavement markings and the provision of Work Zone Traffic Control as indicated elsewhere in this Invitation for Bids.

The Contractor is to furnish all necessary labor and equipment to complete the indicated projects except that the State will supervise and control the operations. Permanent pavement marking will be the responsibility of the State upon completion of the project as indicated herein. The equipment supplied to place the material(s) shall appear on the Department's approved list. All necessary operators shall be supplied along with the appropriate equipment.

5.3 Asphalt Price Adjustments

5.3.1 General

- a. Asphalt price adjustments allowed will be based on the October 1, 2017 average of the F.O.B. terminal price per ton of unmodified PG 64S-22 binder without anti-stripping agent (base average F.O.B. terminal price). The new monthly average terminal price will be determined by the New York State Department of Transportation based on prices of preapproved primary sources of performance graded binder in accordance with the New York State Department of Transportation Standard Specifications.

The October 1, 2017 average is \$421.000 per ton

NOTE: The same grade of asphalt cement used in establishing the base average F.O.B. terminal price shall be used in establishing the new average F.O.B. terminal price.

In the event that one or more of the New York State Department of Transportation pre-approved sources discontinue posting a price for asphalt cement, the base average F.O.B. terminal **price shall not be recalculated.**

- b. The new average F.O.B. terminal price will be determined based on the above F.O.B. terminal prices posted on the 20th of each month, hereafter known as the "Adjustment Date", during the contract period. However, asphalt price adjustments, in accordance with the formula below, will be effective for deliveries made on and after the first of the month following the adjustment date.
- c. The unit prices of liquid bituminous materials purchased from any award based on this specification will be subject to adjustment based on the following formula:

Price Adjustment (Per Ton)	=	$\left(\begin{array}{c} \text{New Monthly Average} \\ \text{F.O.B. Terminal Price} \end{array} - \begin{array}{c} \text{Base Average F.O.B.} \\ \text{Terminal Price} \end{array} \right) \times$	$\begin{array}{c} \text{Total} \\ \text{Allowable} \\ \text{Petroleum \%} \end{array}$
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Positive Price Adjustment number shall be added to original per gallon Bid Price.

Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

New Monthly Average F.O.B. Terminal Price

The average F.O.B. terminal price for unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation per New York State Department of Transportation Standard Specification.

SECTION 5: PAVER PLACED SURFACE TREATMENT - SPECIFIC PROJECTS (Cont'd)

Base Average F.O.B. Terminal Price

The average F.O.B. terminal price of unmodified PG 64S-22 binder without anti-stripping agent is as determined by the New York State Department of Transportation as of October 1, 2017.

Total Allowable Petroleum

The percentage of total allowable petroleum for each item is as follows:

Item #	Asphalt %	Petroleum Allowance %	Total Allowable Petroleum %
415.0X0F0218	6.5	1.0	7.5
415.1X0F0218	6.5	1.0	7.5

Asphalt Price Adjustments will not be allowed for materials which do not have an asphalt cement base.

- d. Work performed after the expiration of the contract, where no extension has been granted, resultant from purchase orders placed prior to expiration of the contract will receive the Asphalt Price Adjustments applicable in effect during the last month of the contract.

Asphalt Price Adjustments for any contracts that are extended will be based on the new average for the month in which the work is done applying the same base established for that contract.

- e. Asphalt price adjustments allowed by this contract shall be calculated and applied to the original prices. There will not be asphalt price adjustments unless the change amounts to more than \$0.100 per ton/\$0.010 per gallon as applicable from the original price. In these instances, prices will revert back to the original prices.
- f. All Asphalt Price Adjustments will be computed to three decimal places.
- g. Should these provisions result in a price structure which becomes unworkable, detrimental or injurious to the State or in prices which are not truly reflective of market conditions or which are deemed by the Commissioner to be unreasonable or excessive, and no adjustment in price is mutually agreeable, the Commissioner reserves the sole right upon ten business days written notice mailed to the Contractor to terminate any contract resulting from this bid opening.
- h. All asphalt price adjustments shall be published by the State and issued to all contract holders whose responsibility will be to attach the appropriate State notification (based on when the work was performed) to the payment invoice submitted to agency

5.3.2 Asphalt Price Adjustment: Example

This example is for illustration purposes only. Actual Base Average Price, etc., may vary:

Item 18403.221101

Base Average Price = \$421.000

New Average Price = \$431.000

% Total Allowable Petroleum = 7.5%

$$\begin{array}{lcl}
 \boxed{\begin{array}{c} \text{Price} \\ \text{Adjustment} \\ \text{(per ton)} \end{array}} & = & \boxed{(431.000 - 421.000)} \times \boxed{0.075} \\
 \\
 \boxed{\begin{array}{c} \text{Price} \\ \text{Adjustment} \\ \text{(per ton)} \end{array}} & = & \boxed{+\$0.750 \text{ per ton}}
 \end{array}$$

Positive Price Adjustment number shall be added to original per gallon Bid Price.

Negative Price Adjustment number shall be subtracted from original per gallon Bid Price.

SECTION 5: PAVER PLACED SURFACE TREATMENT - SPECIFIC PROJECTS (Cont'd)

5.4 Payment

Payment for Paver Placed Surface Treatment shall be made at contract prices per ton for the actual quantity of tons placed by the Contractor. Payment for work zone traffic control and abrading the existing pavement markings shall be included in the payment per ton for the Paver Placed Surface Treatment.

A delivery slip stating quantities of hot mix asphalt concrete for paver placed surface treatment shall accompany each shipment. An invoice listing the quantities of paver placed surface treatment in place shall be sent promptly by the contractor to the address indicated on the purchase order.

5.5 Pre- Paver Placed Surface Treatment Conference

The Contractor shall schedule a Pre-Paver Placed Surface Treatment Conference with the affected Resident Engineer within one month after award of the Contract and at least two weeks prior to the start of the Paver Placed Surface Treatment. Project level supervisors for both the state and the contractor shall be present at this conference.

At this conference the contractor shall present their proposed Paver Placed Surface Treatment schedule, equipment, pavement marking abrading plan, Paver Placed Surface Treatment procedure, and Work Zone Traffic Control plan to the State for approval. At least one week prior to the start of the Paver Placed Surface Treatment, the contractor shall coordinate the details of the project with the Resident Engineer.

5.6 Supervision

The Department of Transportation shall provide supervision for the paving operation, and pavement marking abrading if applicable. The Resident Engineer shall designate a Project Supervisor who shall be in responsible charge of the operation. All orders pertaining to Work Zone Traffic Control plan from the Project Supervisor to the contractor shall be binding on the contractor. The following portions of Section 105 - CONTROL OF WORK of the Standard Specifications shall apply to these projects: 105-01 ENGINEER'S AUTHORITY, 105-05 VENDOR RESPONSIBILITY, 105-06 COOPERATION WITH UTILITIES AND OTHER CONTRACTORS.

5.7 Work Hours

Work shall not be permitted on Sundays and NYS Holidays. If the contractors desire to work overtime on other days, dispensation from NYS Labor Department must be obtained using Department of Labor Form PW-30 (06/17). Night work is prohibited unless agreed to by the Contractor and NYS Department of Transportation. All Overtime Dispensations requests shall be submitted to the Resident Engineer or his/her designee at the preconstruction meeting.

5.8 Construction Details

The construction details shall comply with the requirements specified herein, including those appearing in the enclosed Attachment 10 - *Detailed Specifications – Liquid Bituminous Materials*. The paving supervisor shall have sole responsibility for determining compliance with the specifications. All orders given to the contractor regarding construction details shall be considered final.

5.9 Special Note for Paver Placed Surface Treatment Projects

The Contractor will not be responsible for the initial conditioning of the existing pavement and shoulder surfaces as described in Section 402-3.05 of the NYSDOT Standard Specifications. Patching, joint repair, crack filling will be done by NYSDOT forces prior to the micro-surfacing, chip seal or paver placed surface treatment project. However, once work on the project begins, the Contractor is responsible for keeping the pavement and shoulders clean until the paving operations are completed, as per Section 633-3.01 of the NYSDOT Standard Specifications.

5.10 Restoration of Disturbed Areas

During the course of the work the vendor shall take reasonable care not to disturb areas outside the existing pavement. Any areas disturbed by the vendor shall be returned to their original condition at no expense to the State. Any and all debris generated as part of the work shall be removed by the Vendor upon completion of the project.

SECTION 5: PAVER PLACED SURFACE TREATMENT - SPECIFIC PROJECTS (Cont'd)

5.11 Damaged or Deficient Areas

Prior to acceptance and payment by the State for work under this contract, any placed pavement that ravels, delaminates, fails to properly cure, or is in any way defective shall be redone to the satisfaction of the State at the contractor's expense.

5.12 Paver Placed Surface Treatment Overlay Splices

The contractor shall construct Paver Placed Surface Treatment Overlay Splices (commonly known as rebates) as per the enclosed detail Paver Placed Surface Treatment Overlay Splices (see below). The locations of the Overlay Splices shall be as specified in the Table of Paver Placed Surface Treatment Overlay Splices. All costs to construct the Paver Placed Surface Treatment Overlay Splices, including the costs for cutting the existing pavement, milling the Overlay Splices, cleaning the pavement in the Overlay Splice area, and Controlling Traffic, shall be included in the price bid per ton for the Paver Placed Surface Treatment. No separate payment shall be made.

5.13 Work Zone Traffic Control

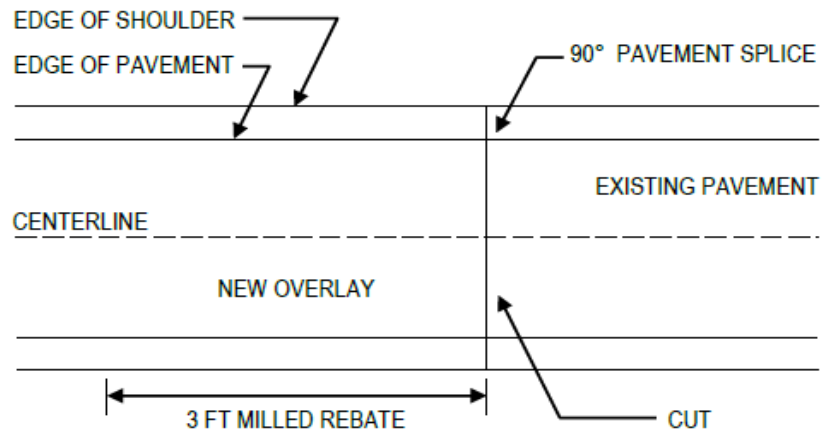
The contractor shall be responsible for Work Zone Traffic Control. Traffic shall be controlled in accordance with Manual of Uniform Traffic Control Devices (MUTCD), Section 619-1 through 619-3 of the Standard Specifications as described herein including modifications to the Standard Specifications. The contractor shall submit a Work Zone Traffic Control Plan for approval to the Resident Engineer at the Pre-Work conference. For two-way roadways, Figures TAST-C1R, TAST-C2R, TAST-C3R, TAST-C4R, TAST-C5R, TAST-C7R, TAST-C1UL, TAST-C2UL, TAST-C3UL, TAST-C4U, TAST-C7UL, TAST-C1UH, TAST-C2UH, TAST-C3UH, and TAST-C7UH included in this document may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way roadways, Figures TAST-C5UL, TAST-C6UL, TAST-C8UL, TAST-C5UH, TAST-C6UH, and TAST-C8UH may be used as a basis for development of a Work Zone Traffic Control Plan. For one-way Freeways or Expressways, Figures TAST-E1, TAST-E2, TAST-E3, TAST-E4, TAST-E5, TAST-E6, and TAST-E7 may be used as a basis for development of a Work Zone Traffic Control Plan.

All necessary flaggers for Work Zone Traffic Control shall be provided by the Contractor. For two-way roadways, a minimum of three flaggers shall be provided while the work operation is underway. One shall be stationed at each end of the applicable operation and one shall be stationed with the operation. For one-way roadways, a minimum of two flaggers shall be provided while work operation is underway. One shall be stationed at the beginning of the applicable operation and one shall be stationed with the operation. The Contractor shall station flaggers such that communication is maintained between the flaggers. Hand signals, radios, pilot vehicles, or some other means of communication may be used subject to the approval of the Resident Engineer.

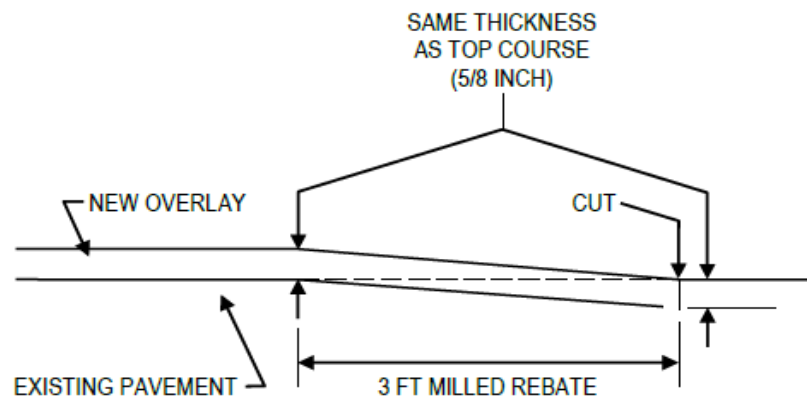
All costs of Work Zone Traffic Control as prescribed by this specification including flagging, temporary pavement marking and/or delineation, and construction signs, are to be included in the unit price bid. No separate payment shall be made.

SECTION 5: PAVER PLACED SURFACE TREATMENT - SPECIFIC PROJECTS (Cont'd)

Paver Placed Surface Treatment Overlay Splice:



PLAN



SECTION

SECTION 5: PAVER PLACED SURFACE TREATMENT - SPECIFIC PROJECTS (Cont'd)

5.13.1 Permanent Construction Signs

The Contractor shall provide construction signs as specified in Section 619-1 through 619-3 of the Standard Specifications and in the MUTCD. At minimum the Contractor shall install the following permanent construction signs:

SIGN	MINIMUM SIZE	LOCATION
ROAD WORK NEXT _____ MILES	<u>G20-1</u> Conventional 36" x 18" Freeways 48" x 24"	On main line upstream of project in each direction
END ROAD WORK	<u>G20-2</u> Conventional 36" x 18" Freeways 48" x 24"	On main line after end of project in each direction
ROAD WORK AHEAD	<u>W20-1</u> Conventional 36" x 36" Freeways 48" x 48"	On main line in advance of the affected highway segment in each direction and on major intersecting roads 300 -500 feet in advance of main line. Sign should be covered if it conflicts with temporary signing in the vicinity. (Place between the G20-1 and the first warning sign that states condition- i.e. W8-12, W8-9 or W8-15)
DO NOT PASS	<u>R4-1</u> Conventional 24" x 30"	If 2'x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign at or within 100 feet of the beginning of the unmarked area, second within 1,000 feet and subsequent signs, spaced every ½ mile along project in each direction
NO CENTER LINE	<u>W8-12</u> Conventional 36" x 36"	If 2'x 4" temporary yellow markings are used instead of full barrier centerline pavement markings, place the first sign in advance of the condition and the first "DO NOT PASS" sign: 300' urban is preferred (100' minimum), 500' rural is preferred (200' minimum). Place additional signs spaced every 2 miles on mainline in each direction and after every major intersecting road.
LOW SHOULDER	<u>W8-9</u> Conventional 36" x 36" Freeways 48" x 48"	Place on mainline spaced every 2 miles along project in each direction and after every major intersecting road until shoulder back-up is installed (if conditions warrant use, place between the W8-12 and R4-1, maintaining a minimum of 200' between signs for rural roads and 100' on urban. The W8-12 can be moved upstream to accommodate the required spacing.)
GROOVED PAVEMENT	<u>W8-15</u> Conventional 36" x 36" Freeways 48" x 48"	On any roadway 500 feet in advance of rebates milled under this contract, but not paved. Remove or cover after paving rebate.

**All signs should maintain an absolute minimum spacing of 200' rural or 100' urban. 500' is preferred on rural and 300' is preferred on urban. Double stacking of any of the above signs, or combination thereof, will NOT be permitted.

SECTION 5: PAVER PLACED SURFACE TREATMENT - SPECIFIC PROJECTS (Cont'd)

Major intersecting roads are defined as through State, County, Town, Village, or City roads. The Contractor may provide Portable signs as shown in Figure 6F-2 of the MUTCD and meeting the requirements of Section 619 of the Standard Specifications for lane closures during work hours. Signs left active at night shall be rigid and reflectorized in accordance with the Standard Specifications.

With prior permission of the State's Resident Engineer, the Vendor may provide portable signs as shown in Figure 6F-2 of the MUTCD for the above referenced DO NOT PASS and NO CENTER LINE signs. The Contractor shall be responsible for assuring that these signs will be in their upright, visible positions twenty-four hours a day, seven days a week while 2' X 4" temporary yellow markings are used instead of full barrier pavement markings

5.13.2 Temporary Pavement Markings

The Contractor shall install and maintain temporary pavement markings on any paved surface without permanent pavement markings before opening it to traffic, before nightfall or before the end of the work day, whichever comes soonest except for areas that are open during the work shift with channelizing devices or flaggers. Temporary pavement markings shall meet the requirements of Section 619 of the Standard Specifications except that two-lane, two-way highways may be left without full barrier centerlines in no passing zones for a maximum of 7 calendar days provided that NO CENTER LINE (W8-12, black on orange), NO PASSING ZONE (W14-3, black on orange pennant shaped sign), and DO NOT PASS (R4-1) signs are used consistent with the MUTCD and in conjunction with yellow 2 foot by 4 inch temporary markings consisting of retroreflective removable pavement marking tape, paint or yellow temporary overlay markers installed on a 40 ft. cycle to delineate the centerline location.

The State is responsible for the final pavement markings unless otherwise indicated in the contract. If the vendor chooses to install NO CENTER LINE and DO NOT PASS signs and temporary yellow 2 foot by 4 inch pavement markings in lieu of full barrier centerline markings, the signs shall be left in place until the state has completed installing the final pavement markings. The state will normally complete final pavement markings within 7 days of the project completion. However, if unavoidable situations delay the pavement marking installation the signs shall remain in place for 14 calendar days after the project has been completed or until the state has completed installing the final pavement markings, whichever comes first. If permanent pavement marking cannot be installed within 14 days of the project completion, state must install interim pavement marking including center lines, edge lines, stop bars, and simple crosswalks with no hatching before the end of 14 days after project completion.

All costs for Work Zone Traffic Control including flagging, temporary pavement markings, delineation, and construction signs are to be included in the prices bid per ton or square yard as applicable.

5.13.3 Abrading Existing Pavement Markings

The Contractor shall remove any epoxy or thermoplastic pavement markings. Other markings shall be removed as ordered by the Resident Engineer. Care shall be taken to avoid damage to passing traffic. All damage to passing traffic caused by the Contractor's operations shall be the Contractor's responsibility. Waste material generated by the abrading operation shall be cleaned up and disposed of by the Vendor.

When the Contractor abrades the existing pavement markings, the Contractor shall place temporary pavement markings as specified elsewhere in this Invitation for Bids under Work Zone Traffic Control, unless the paving material will be placed the same day as pavement markings are abraded. The Contractor shall make every effort to expeditiously place the paving material in areas where pavement markings have been abraded and temporary pavement markings are in place. Under no circumstances will temporary pavement markings be allowed for more than five calendar days in areas where pavement markings have been abraded. In this event, the Contractor shall be required to place full pavement markings at no cost to the state. During the pavement markings abrading operation, traffic will be controlled by the Contractor in accordance with the Work Zone Traffic Control requirements included herein. The Contractor shall submit a proposed Traffic Control Plan to the Resident Engineer for approval. The plan may be based on the Work Zone Traffic Control drawings included in this Invitation for Bids.

Payment for pavement marking abrading shall be included in the price bid per ton of paver placed surface treatment. No separate payment shall be made.

SECTION 5: PAVER PLACED SURFACE TREATMENT - SPECIFIC PROJECTS (Cont'd)

5.13.4 **Special Note: Work Zone Intrusion Initiative**

As part of the Department of Transportation's Work Zone Intrusion Initiative, the following countermeasures shall apply to this Invitation for Bids.

Channelizing Device Spacing Reduction

A maximum channelizing device spacing of 40 ft. shall be provided at work sites where workers are exposed to traffic. This spacing shall be maintained a reasonable distance upstream of workers, and shall be used throughout the work zone.

Where tapers are located less than 500 ft. from the work site, the 40-ft. spacing shall be used in the tapers as well.

Drums or vertical panels are preferred for intermediate to long-term stationary work zones, and at any locations where the risk of intrusion is high. Traffic cones are normally adequate for work zones set up and removed on a daily basis.

In long lane or shoulder closures, at least two channelizing devices shall be placed transversely at maximum 800 ft. intervals to discourage traffic from driving through the closed lane. Transversely placed devices are not required where pilot car are in use.

Frequent checks shall be made to reset channelizing devices dislodged by traffic.

Flagger Station Enhanced Setups

Additional cones and a flag tree meeting Section 6F.62 of the MUTCD shall be used upstream of flagger stations to provide added warning to drivers. These devices shall be used for flagger stations except those that are constantly moving or are in use at one location for no more than a few minutes. If the W20-7a Flagger sign is used, the additional cones and flag tree shall also be used.

For additional details on Flagger Station Enhanced Setups, see Work Zone Traffic Control drawings in this Invitation for Bids.

Temporary Rumble Strips

a. Description

This work shall consist of the installation, maintenance and subsequent removal of temporary rumble strips in paving work zones where indicated in the Invitation for Bids or as directed by the Engineer.

b. Materials

Rumble strips shall be either constructed in place from a raised strip of asphalt concrete or constructed in place with removable pavement marking tape. Raised removable tape rumble strips shall be formed by applying four layers of removable black non-reflectorized removable pavement marking tape. The tape shall be applied to a clean, dry pavement surface in accordance with the manufacturer's recommendations. The pavement surface shall be cleaned with compressed air just prior to application of the tape. Raised asphalt rumble strips shall be formed from hot mix asphalt meeting the requirements of Items 402.058903 or 402.098903. Tack coat meeting the requirements of Materials Designation 702-XXXXT Asphalt Emulsion Diluted Tack Coat shall be used to adhere the rumble strip to the existing pavement. Temporary rumble strips shall be formed using a specially constructed rumble strip paver (drag box) pulled transversely across the pavement, or by hand placement between forms fixed to the pavement. If forms are used, they shall be removed prior to compaction of the asphalt mixture. Compaction shall be accomplished using a plate tamper or a static roller. The roadway surface on which the rumble strips are to be attached shall be dry, free of surface contaminants such as dust or oil, and shall be 45°F or greater unless otherwise authorized by the Engineer. The pavement surface shall be cleaned with compressed air just prior to tack coating and subsequent installation of rumble strips.

Temporary rumble strips shall be placed in a succession of three 6-Strip Patterns according to the attached "Suggested Layout Details - Temporary Rumble Strips". Each strip shall be placed on 10 foot centers and traversing the full width of each travel lane. On curbed roadways, rumble strips shall end a minimum of 3 feet from the curb so as to not interfere with drainage. Rumble strips shall be between 6 inches and 9 inches in width and have a final compacted thickness of 0.4 inches \pm 0.1 inches.

SECTION 5: PAVER PLACED SURFACE TREATMENT - SPECIFIC PROJECTS (Cont'd)

Any raised rumble strips that fail to adhere to the pavement, or become damaged or flattened such that, in the opinion of the Engineer, they are no longer performing their intended function, shall be replaced or repaired by the Contractor to the satisfaction of the Engineer. Any associated damage to the pavement shall also be repaired by the Contractor to the satisfaction of the Engineer. These replacements or repairs shall be made at no additional expense to the Purchasing Agency.

When directed by the Engineer, (e.g., prior to the start of the winter plowing season), or prior to the placement of successive pavement courses, the Contractor shall completely remove the rumble strips from the pavement. Rumble strips shall be removed upon completion of work and concurrently with the removal of other temporary traffic control signs and devices. Any pavement that is damaged in the process of removing the rumble strips shall be repaired by the Contractor to the satisfaction of the Engineer at no additional expense to the Purchasing Agency.

c. Basis of Payment

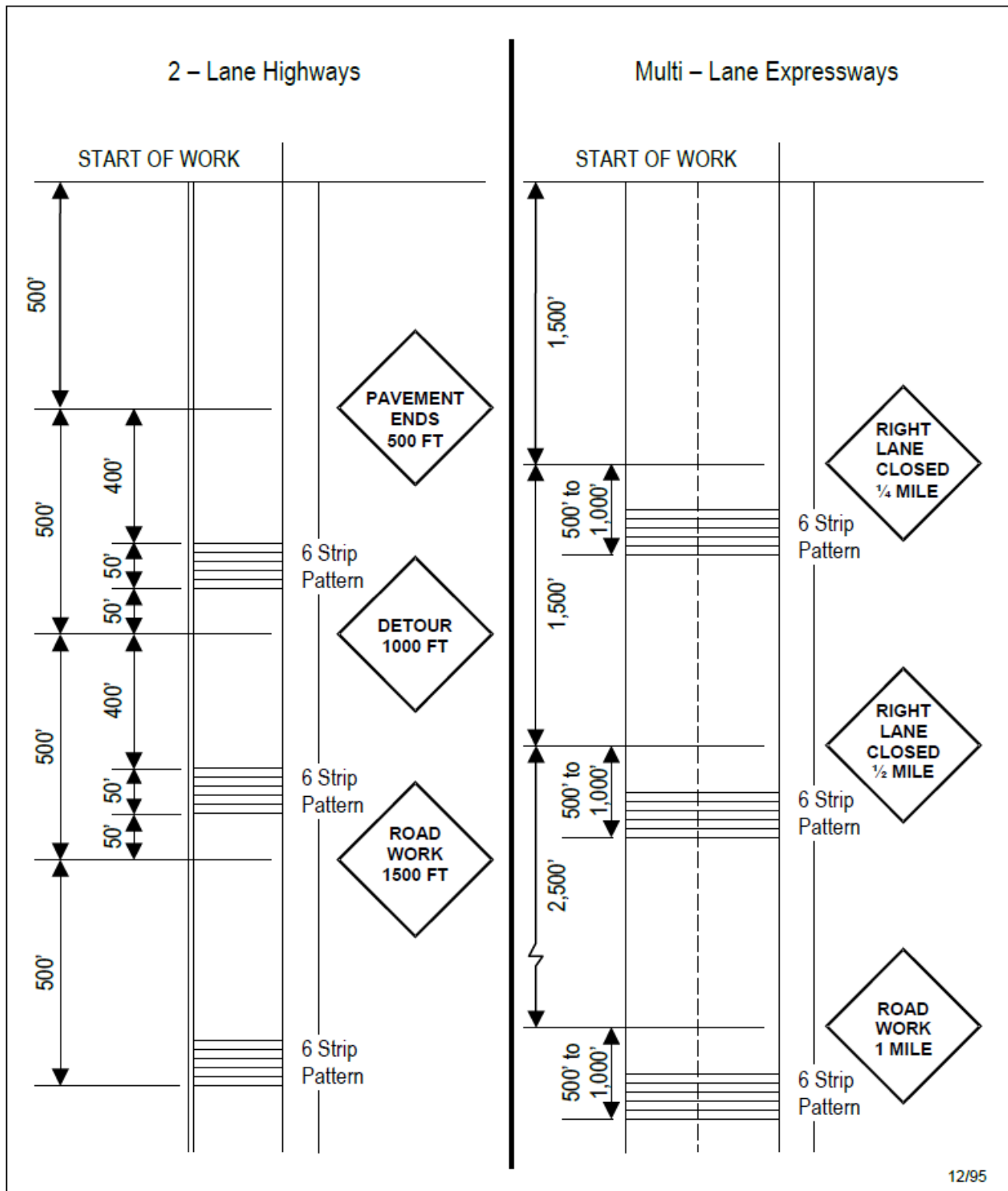
All costs for the installation, maintenance and removal of temporary rumble strips are included in the price per ton or square yard as appropriate. No separate payment shall be made.

d. Suggested Layout Details Drawing-- Temporary Rumble Strips

See the Suggested Layout Details Drawing on the next page.

SECTION 5: PAVER PLACED SURFACE TREATMENT - SPECIFIC PROJECTS (Cont'd)

Suggested Layout Details -- Temporary Rumble Strips



SECTION 5: PAVER PLACED SURFACE TREATMENT - SPECIFIC PROJECTS (Cont'd)

5.14 Special Notes – Paver Placed Surface Treatment

5.14.1 Funding Source (Paver Placed Surface Treatment)

Project 9V1822 will be funded by Federal Aid.

Project 402069 is 100% state funded.

5.14.2 Special Note - Rail Road Involvement in Federal Funded Projects

Bidders are advised that there may be active at-grade railroad crossings within the limits of projects in this Invitation for Bids. The following at-grade railroad crossings have been identified, but there may be others within the limits of these projects that have not been identified:

Project Number	County	Route	Rail Road Name	Location
9V1822	Chenango	Rte. 12B	NYSEW	RM 12B-9201-1026

At the identified at-grade crossings, and any other active at grade railroad crossings encountered on the projects in this Invitation for Bids, the contractor shall conduct its work and handle the equipment such that no part of any material or equipment shall foul a track, catenary, electrical facility or signal facility. A track is fouled when any object is brought within 7.62 M (25') of the centerline of the track or the nearest point of a rail road's catenary, electrical facility or signal facility.

5.14.3 NYSDOT REGION 4 Special Notes (Paver Placed Surface Treatment)

REGION 4 General Special Notes

1. Contractor shall use non-vibratory rolling over culverts or known utilities within the project limits or as ordered by the engineer in charge. Specific locations for non-vibratory rolling will be discussed at the pre-microsurfacing meeting.
2. Prior to the start of work, the contractor shall inventory all pavement markings and provide the engineer with a copy of the inventory. As part of a pavement marking program update, the Regional Traffic and Safety group is reviewing all pavement markings within the limits of paving projects. Upon their review, there may need to be adjustments to the pavement marking layout. The contractor shall be responsible for completing striping layout, including changes as indicated by the Regional Traffic and Safety Group.
3. The contractor shall remove any plowable reflective markers in the pavement, if present, prior to paving. The hole left in the existing pavement, shall then be filled with a hot mix asphalt material; 9.5 mixture, or mixture approved by the Resident Engineer. Cost to be included in the bid price for the associated project.
4. Some projects may require loop detectors to be re-established prior to or once microsurfacing has been completed. This shall be done by others and coordinated by the Resident Engineer.
5. The installation of temporary rumble strips at the beginning of each project work zone shall be at the discretion of the engineer.
6. Any and all debris generated as part of the work shall be removed by the Vendor within five days of completion of microsurfacing operations.

SECTION 5: PAVER PLACED SURFACE TREATMENT - SPECIFIC PROJECTS (Cont'd)

REGION 4 Temporary Lane closure Restrictions for Major Holidays

There shall be no temporary lane closures on roadway facilities owned and/or maintained by NYSDOT on the major holidays listed below.

Construction activities that will result in temporary lane closures shall be suspended to minimize travel delays associated with road work for major holidays as follows:

2018

<u>Memorial Day</u> - Monday May 28.	Beginning 6:00 AM Friday, May 25 and ending 6:00 AM Tuesday, May 29.
<u>Independence Day</u> - Wednesday July 4.	Beginning 6:00 AM Tuesday, July 3 and ending 6:00 AM Thursday, July 5.
<u>Labor Day</u> - Monday, September 3.	Beginning 6:00 AM Friday, August 31 and ending 6:00 AM Tuesday, September 4.

Project 402069 – Livingston County (Route 20A)

1. This project is a paver placed surface treatment (Novachip) project. Novachip will include travel lanes and shoulders.
2. Time Restrictions:
 - a. Rte 256 to Rte 15 – No Time Restrictions
 - b. Rte 15 to Village of Livonia – Flagging Prohibited 3-6 PM
 - c. Livonia Autumn festival (2nd Saturday in September) – No work allowed on the Friday before.
 - d. Major Holiday Lane Restriction Special Note applies to this project.
3. Intersections shall be paved following the mainline edge of pavement. Rebates will be required on all side roads. Novachip shall be rolled down to flush at driveways (residential & commercial).
4. Local fire, police, ambulance, and school authorities shall be notified by the Contractor prior to commencing work in order to maintain sufficient emergency services and to allow school officials sufficient time to plan alternative bus routes, if necessary.

5.15 Detailed Specifications – Paver Placed Surface Treatment

Please see Attachment 10 – *Detailed Specifications – Liquid Bituminous Materials*.

5.15.1 Project Dimensions - Paver Placed Surface Treatment

Information on pavement widths for projects in this Invitation for Bids is listed for informational purposes only. The dimensions listed are the best information available, but 100% accuracy is not guaranteed. Bidders should visit the project site to confirm the dimensions given and familiarize themselves with the project particulars before submitting a bid. The Department assumes no responsibility for erroneous information listed herein.

The pavement width listed is the total width of all the travel lanes only.

The shoulder width is for one shoulder only.

Project Number	Item	Travel Lanes Width (feet) (total)	Lane Width (feet) (one lane)	Shoulder Width (feet) (one shoulder)	Number of Lanes
402069	415.12020218	Varies 24-36	12	Varies 4-6	Varies 2-3
9V1822	415.13020218	24	12	8	2

SECTION 5: PAVER PLACED SURFACE TREATMENT - SPECIFIC PROJECTS (Cont'd)

5.15.2 Rebates - Paver Placed Surface Treatment

Project Number	Rebate Location	Rebate Width (feet)
402069	Route 256 - West Project Limit	36
	Turtle Rock Road	61
	Pebble Beach Road	51
	Route 15	46
	Stone Hill Road	60
	Camp Run Drive	113
	Thomas Drive	55
	Bronson Hill Road	104
	E Lake Road	115
	Pennemite Road	72
	Longview Blvd	48
	Livinia Community Park	51
	WVL Livonia - East Project Limit	30
9V1822	Begin @ Rte 12 Intersection	49
	Howard Road	56
	Foote Hill Road South	36
	Stone House Road	50
	Foote Hill Road North	57
	Sanitarium Road	51
	Fletcher Road South	69
	Fletcher Road North	54
	Reese Road	68
	Railroad North 1	75
	Railroad South 1	75
	Baldwin Station Road West	78
	Baldwin Station Road East	85
	Williams Road	51
	End @ Coye Road	42